<table>
<thead>
<tr>
<th>EP#</th>
<th>SPEC</th>
<th>TITLE</th>
<th>VERSION</th>
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<tr>
<td>EP 3014</td>
<td>Safety and Protection of Railroad Traffic and Property</td>
<td>rev 3 02/03/06</td>
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<td>EP 3014</td>
<td>Submission Documentation Required for Amtrak Review and Approval of Plans for Bridge Erection, Demolition and Other Crane Hoisting Operations Over Railroad Right of Way</td>
<td>rev 3 12/15/05</td>
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<td>EP 3014</td>
<td>Requirements for Temporary Protection Shields for Demolition and Construction of Overhead Bridges and Other Construction</td>
<td>rev 1 8/7/2001</td>
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<td>EP 3014</td>
<td>Requirements for Temporary Sheeting and Shoring to Support Amtrak Tracks</td>
<td>rev 2 8/7/01</td>
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<tr>
<td>EP 3016</td>
<td>Crashwall Requirements AREMA Chapter 8, Article 2.1.5</td>
<td>Feb-05</td>
<td></td>
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<tr>
<td>EP 3016</td>
<td>Insurance Requirements (Attachment B to Permit to Enter) (Limits may be greater for certain projects)</td>
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<tr>
<td>CE-17</td>
<td>Temporary Permit to Enter Upon Property</td>
<td>2/14/2006</td>
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<td>EP3005</td>
<td>Pipeline Occupancy</td>
<td>rev 10/30/2002</td>
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<td>CE-4</td>
<td>Specifications for Wire, Conduit, and Cable Occupations</td>
<td>Mar-97</td>
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<tr>
<td>EP 3003</td>
<td>Amtrak Standard Structures Plan SP8002 - High Level Platform Clearances and Edge Details</td>
<td>4/3/00</td>
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<td>EP 4006</td>
<td>Overbuild of Amtrak Right-of-Way Design Policy</td>
<td>rev 5/5/05</td>
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<tr>
<td>63</td>
<td>Qualified Consultants for Electrification Design - 2004</td>
<td>rev 2/7/05</td>
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<td>63</td>
<td>Electrified Territory O.H. Bridge Typical Protection Barrier Standard Drawings ET-1446-D</td>
<td>Approved 6/7/99</td>
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<tr>
<td>63</td>
<td>Electrified Territory O.H. Bridge Temporary Protection Shield &amp; Barriers Standard Drawings ET-1447-D</td>
<td>Approved 1/7/00</td>
<td></td>
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</tbody>
</table>

JEY speclist.doc rev 4/7/06
SCOPE AND NATURE

To establish uniform requirements for the design and construction of overhead bridges by outside agencies.

SPECIAL REFERENCE

Standard Track Plan AM70050
ET Standard Plan ET1446-D
ET Standard Plan ET 1447-D
Engineering Practice 3003
Engineering Practice 3014 Section 02261
Engineering Practice 3014 Section 01520
Engineering Practice 3014 Section 01142
Engineering Practice 1604
AED-1 Procedures and Design Criteria to be Employed by Electrification Consultants Engaged in the Design of Electrification Facilities on the National Railroad Passenger Corporation
AREMA Manual for Railway Engineering – Chapter 8, Article 2.1.5

SPECIAL MATERIALS

N/A
PROCEDURE

DESIGN AND CONSTRUCTION CRITERIA FOR OVERHEAD BRIDGES

New or reconstructed bridges over Amtrak Railroad tracks shall meet the following requirements:

I. CLEARANCES
   a. Horizontal and Vertical Clearances shall be in accordance with the current Standard Track Plan AM70050 – "Minimum Roadway Clearances". When replacing existing bridges that have substandard clearances, every effort shall be made to improve the clearances.
   b. Temporary Construction clearances may be less if approved by Amtrak.
   c. Amtrak shall be furnished as-built drawings showing actual clearances as constructed.
   d. Horizontal clearances may need to be increased if a maintenance roadway is required by Amtrak.
   e. Clearances shall be adjusted to provide for any planned changes in the trackage, including the change in track centers and raising of the tracks. Amtrak shall be contacted to obtain information on planned track changes. If the track is in a sag at the proposed overhead crossing location, it should be anticipated that the track may be raised to improve the condition. Clearances shall be increased to provide for this track raise.

II. CRASH WALLS
   AREMA Manual for Railway Engineering, Chapter 8, Article 2.1.5 Pier Protection, describes the requirements for the crash walls. Crash walls are required when face of the pier is closer than 25'-0" from centerline of the nearest track, measured perpendicular to the track, unless the size of the pier satisfies the criteria for piers of heavy construction as listed in Article II (d).
   Crash walls shall meet the following requirements:
   a. Crash walls for piers from 12 feet to 25 feet clear from the centerline of the track shall have a minimum height of 6 feet above the top of rail. Piers less than 12 feet clear from the centerline of the track shall have a minimum crash wall height of 12 feet above the top of rail. Crash walls shall be at least 2'-6" thick and at least 12 feet long.
   b. For multi-column piers, the crash wall shall connect the columns and extend at least 1 foot beyond the outermost columns parallel to the track.
   c. Crash walls shall be anchored to the footings and columns as applicable and shall extend to at least four feet below the lowest surrounding grade.
d. A pier shall be considered of heavy construction if it has a cross-sectional area equal to or greater than that required for the crash wall and the larger of its dimensions is parallel to the track.

e. Consideration may be given to providing protection for bridge piers located more than 25 feet from the centerline of track as conditions warrant. In making this determination, account shall be taken of such factors as horizontal and vertical alignment of the track, embankment height, and an assessment of the consequences of serious damage in the case of a collision.

III. BARRIERS
a. In the territory where there is railroad electrification, barriers shall be designed and constructed on both faces of the bridge in conformance with the current ET Standard Plan ET-1446-D "Electrified Territory OH Bridge Typical Protection Barrier".

b. In non-electrified territory, chain-link fence with 1" mesh fabric may be substituted for the solid barrier.

IV. ELECTRIFICATION SYSTEMS.
a. In electrified territory the agency responsible for the project shall be required to comply with AED-1 "Procedures and Design Criteria to be Employed by Electrification Consultants Engaged in the Design of Electrification Facilities on the National Railroad Passenger Corporation".

V. DRAINAGE
It is essential to maintain good drainage of railroad right-of-way during construction and provide for good drainage after construction of the overhead crossing. The following guidelines shall be followed:

a. Piers and end slopes shall be located such that they do not interfere with railroad drainage system, including, but not limited to, ditches, pipes, catch basins and detention basins.

b. Drainage from the section of the bridge above railroad right-of-way shall be collected with drain pipes and drained away from the railroad right-of-way. No open scuppers are permitted on the portion of the bridge over the railroad right of way. Drainage from any scuppers shall be drained away from the railroad right-of-way.

c. After completion of construction, railroad drainage ditches shall be cleaned of all debris to the satisfaction of Amtrak representatives.

d. During construction, silt fences shall be provided to prevent silt ing of the ditches. All drainage from the construction site must be collected and directed away from railroad property.
e. If the project will alter drainage characteristics at the site of the crossing at any time during or after completion of the project, three sets of the drainage calculations and plans shall be submitted to Amtrak for approval. Approval of the drainage plans shall not relieve the submitting agency of responsibility for the drainage design.

f. All disturbed areas on the railroad right-of-way shall be properly seeded and mulched to the satisfaction of Amtrak.

VI. STRUCTURE EXCAVATION AND SHORING
Shoring or sheeting protection shall be provided in conformance with the current Engineering Practice 3014 Section 02261 – "Requirements for Temporary Sheeting and Shoring to Support Amtrak Tracks". Blasting is restricted and if required shall be in conformance with Engineering Practice 3003- "Blasting Procedures".

a. A construction procedure for temporary shoring shall be shown on the drawing.

b. Safety railing meeting OSHA requirements shall be installed when temporary shoring is within 12 feet of track. When shoring is further than 12 feet from centerline of track, railing shall be provided if necessary for safety of workers and railroad personnel.

VII. GENERAL REQUIREMENTS
a. The distance from the nearest milepost at intersection of centerline of the track and centerline of the bridge shall be shown on the General Plan.

b. Horizontal and vertical clearances shall be marked clearly on the General Plan and Elevation.

c. Soil parameters used in designing the shoring shall be based on soil and rock data obtained from test borings performed for the design of the proposed structure.

d. It is the designer's responsibility to ensure that a constructability analysis is performed to confirm that the structure, as designed, can be constructed in the applicable railroad environment.

e. Piers, abutments and columns located within the railroad right-of-way shall have an anti-graffiti coating consisting of a three-coat system. Each of the three coats shall be a clear, two component, polyester type, aliphatic urethane. Each coat shall be applied at a minimum 2 mils DFT.

VIII. DEMOLITION OF EXISTING STRUCTURES
Railroad tracks shall be protected from damage during demolition of existing structure or replacement of deck slab. Either of the following methods may be used:

a. During demolition of the decks, a protection shield shall be erected over the right-of-way to catch falling debris. The shield shall be designed and constructed in
conformance with the current Engineering Practice 3014 Section 01520 - "Requirements for Temporary Protection Shields for Demolition and Construction of Overhead Bridges and Other Structures".

b. On light traffic density lines or when overhead protection shield cannot be installed due to limited clearance or type of superstructure, track may be protected by timber mats placed over the track structure, subject to approval by Amtrak. Timber mats shall be made in sections such that they may be lifted in and out quickly. Mats shall not rest on ties or rails. Geo-fabric or canvas shall be placed over the track structure to keep the ballast clean. The contractor shall submit detailed plans of the protection shield or the timber mats to the Project Engineer for approval prior to the start of demolition. The plans shall be prepared by a Registered Professional Engineer and shall bear his seal and signature. Blasting will not be permitted to demolish a structure over or within the railroad right-of-way.

IX. ERECTION PROCEDURE
The contractor shall submit a detailed procedure for erecting the spans over railroad right of way. The procedure shall be in conformance with the current Engineering Practice 3014 Section 01142 - "Submission Documentation Required for Amtrak Review and Approval of Plans for Bridge Erection, Demolition, and Other Crane/Hoisting Operations over Railroad Right-Of-Way".

X. PIPELINES
All pipelines occupying the bridge shall be designed and constructed in accordance with Engineering Practice 1604 Pipeline Occupancy - Requirements and Specifications.

XI. CROSSING DATA
Plans submitted for review by Amtrak shall contain, at the minimum, the following information:
- Roadway name or route number
- Amtrak bridge number
- Skew angle to the railroad center line
- Proposed foundation type and elevation of bottom of footing
- Pile type and depth (if applicable)
- Top of rail elevation for all tracks
- Drainage modifications
- Elevation and cross sections of existing and proposed structure
• North arrow
• Railroad clearance information with dimensions in English units

The following “Overhead Bridge Crossing Data” sheet shall be completed and submitted, by the agency responsible for the project, with both the Preliminary and Final Plan submission to Amtrak.
OVERHEAD BRIDGE CROSSING DATA

1. LOCATION: ____________ ____________ ____________
   CITY COUNTY STATE

2. Distance from nearest Mile Post to Centerline of Bridge: ____________

3. DOT Crossing Number: ____________

4. State Project Number: ____________

5. Description of Project:
   ___________________________________________________________________
   ___________________________________________________________________
   ___________________________________________________________________

6. Minimum Horizontal Clearance from Centerline of nearest Track:
   A. Proposed: ____________ B. Existing (if applicable): ____________

7. Minimum Vertical Clearance above top of high rail:
   A. Proposed: ____________ B. Existing (if applicable): ____________

8. List piers where crashwalls are provided:
   Pier: ___________________ Distance from centerline of track: ___________________
   ___________________ ___________________

9. Describe how drainage from bridge is handled:
   ___________________________________________________________________
   ___________________________________________________________________
   ___________________________________________________________________

10. List piers where shoring is required to protect track:
    ___________________________________________________________________
    ___________________________________________________________________

11. Plan Submittal: Preliminary: ____________ Final: ____________
REPORTING
   As detailed in procedure.

RESPONSIBILITY
   Amtrak I&C Staff  Comply with Procedure
   Director I&C       Assure Compliance
   Amtrak Design Staff Comply with Procedure
   Amtrak Construction Staff Comply with Procedure
   Sr. Director Construction Assure Compliance
MAINTENANCE AND PROTECTION OF RAILROAD TRAFFIC DURING CONTRACTOR OPERATIONS

SCOPE AND NATURE
This practice provides procedures for Contractors to follow, when working on Amtrak Right-of-Way, adjacent to Amtrak tracks, to assure the protection of trains and maintenance of scheduled railroad operations.

SPECIAL REFERENCE
Note: This information was included under former Engineering Practice 1305.
Contractors shall comply with procedures detailed in the following specifications, when applicable:

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Revision No.</th>
<th>Revision Date</th>
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<tr>
<td>01141A</td>
<td>Safety and Protection of Railroad Traffic and Property</td>
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SPECIAL MATERIALS
Not Applicable

PROCEDURE
1. The Contractor shall conform to the applicable specifications.
2. Amtrak I&C shall assure that agencies and other third parties proposing construction on or adjacent to Amtrak Right-of-Way conform to Amtrak requirements detailed herein.
3. Amtrak Design and Construction shall review the Contractor’s proposed design and construction procedures for conformance with specifications, with sound engineering practice and with the procedures detailed in the applicable Engineering Practice document.
4. Amtrak Construction shall monitor the activities of the Contractor on-site to assure compliance/adherence to approved procedures throughout the construction period.

REPORTING
As detailed in specifications.

RESPONSIBILITY
Amtrak I&C Staff          Comply with Procedure
Director I&C                Assure Compliance
Amtrak Design Staff        Comply with Procedure
Director Structures Design Assure Compliance
Amtrak Construction Staff Comply with Procedure
Sr. Director Construction Assure compliance
SCOPE AND NATURE

The development of property resulting in a closed or partially enclosed overbuild structure over tracks, shall include design features to ensure adequate ventilation, illumination, emergency egress and fire protection to provide a safe environment for Amtrak employees and customers during normal and emergency operations. The developer shall make all accommodations to the above grade structure, and shall be responsible for the design, construction and maintenance of the systems described below.

These criteria are intended to serve as the basis of design. It is recognized that there may be more than one acceptable solution and Amtrak is prepared to review any scientific analysis that accomplishes the stated function and cooperate with the developer to achieve a maintainable and effective overbuild system.

The developer shall comply with National Fire Protection Association NFPA 130 and referenced documents therein. Except, if the overbuild property is in the City of New York and not already constructed, it shall be assumed to be part of a continuous overbuild longer than 1000 feet and therefore mechanical ventilation, egress, fire protection and lighting shall be provided accordingly. The developer shall also comply with all local, state and federal requirements, should they be more stringent than described herein.

SPECIAL REFERENCE

American Railway Engineering and Maintenance-of-Way Association, AREMA Manual for Railway Engineering, Chapter 6, Buildings and Support Facilities


Illuminating Engineering Society of North America, Lighting Handbook, Chapter 11


National Fire Protection Association, NFPA 130, Standard for Fixed Guideway Transit and Passenger Rail Systems

U.S. Department of Labor, 29 CFR 1910, OSHA Safety and Health Standards

Van Nostrand Reinhold, Tunnel Engineering Handbook, Chapter 19, Tunnel Ventilation

SPECIAL MATERIALS

Not applicable.

PROCEDURE

Here are special design criteria for designers to consider.

Normal Ventilation

Ventilation shall be provided as needed to control air quality. An engineering analysis to model the specific railroad operating scenarios of diesel locomotives within must be performed. The result of the analysis shall be the design of a ventilation system with appropriate controls to maintain safe, acceptable concentrations of diesel exhaust gases. Amtrak will have personnel routinely assigned to work in the track area doing maintenance on tracks, signals, rolling stock, and building equipment. Hence, the prescribed occupational limits for NOx, CO, Aldehydes and unburned hydrocarbons must be met. These levels shall be as defined by OSHA and approved by the Amtrak. Amtrak will also provide the developer with the operating scenarios regarding train movement within the overbuild. Stopped locomotives with head-end power, work train movements and mail and baggage switching shall be specifically addressed in the engineering analysis.

The operation of locomotives in the traction and/or hotel power mode requires the collection of emissions, typically though exhaust hoods, while still hot and near the ceiling. Throat velocity of exhaust inlets should be at least double the terminal velocity of the emissions that are to be captured. Past designs have shown a throat velocity of 1800 to 2200 feet per minute to be applicable approximately 19 to 22 feet above top-of-rail. Duct inlets should be close to the center of track, nominally 12 to 15 feet on-centers. The emission temperature at source will be between 2500 and 9500 F. A diesel locomotive that has been operating for several minutes in a lightly loaded mode, will often produce large amounts of visible smoke and emissions from accumulated, unburned fuel. This short-time emission is likely to occur as a train starts to accelerate upon departure. In the affected zone of operation adjacent to the area, some products of combustion will not be captured. Therefore, a general ventilation dilution system should be incorporated with a minimum rate of 6 air-changes per hour. This system may be operated only during the transiting of the affected area and for 10-15 minutes after each transit to clear residual emissions. Make-up must be provided to balance air flows once all open areas are covered. Make-up should be introduced at a level below 4 feet above the top-of-rail to insure make-up air does not cool the emissions or cause dispersal. Because of the high exit velocity from some exhausts, (up to 3000 feet per minute) side baffles on ducts and structures should be avoided to prevent deflecting emissions away from inlet grilles. Noise levels from the
ventilation system shall not exceed OSHA regulations while also meeting applicable local noise ordinances.

**Emergency Ventilation**

Mechanical emergency ventilation shall be provided in the City of New York, and for overbuilds greater than 1000 feet in length elsewhere. An engineering analysis to determine the need for mechanical emergency ventilation shall be conducted in overbuilds less than 1000 feet, but greater than 200 feet elsewhere. Mechanical emergency ventilation is not required for overbuilds less than 200 feet in length elsewhere. The ventilation system shall:

- Provide a stream of non-contaminated air to passengers in a path of egress away from a train fire.
- Produce air-flow rates to prevent back-layering of smoke in a path of egress away from a train fire.
- Limit the air temperature in a path of egress away for a train fire to 140°F or less.
- Ensure visibility during a fire sufficient to see an internally-lighted 7.5 foot-candle sign at a distance of 100 feet (light attenuation coefficient of 0.06096/ft).
- Comply with all provisions of NFPA 130, Chapter 4.

An engineering analysis to model the effect of a fire within the limits of the mechanically ventilated overbuild must be performed. The result of the analysis shall be the design of the ventilation system with appropriate controls. Two fire sizes, large and small, shall be used for design criteria:

1. Large: For a single-track/tunnel scenario, it may be appropriate to use the Subway Environmental Simulation Computer Program, Version 4 or later, available from the U.S. Department of Transportation. Use a fire heat release rate of 106.2 million BTU/hr (30 MW). For a multi-track/station scenario, Computational Fluid Dynamics (CFD) may be required. Use 177.5 million BTU/hr (50 MW) developing over a span of 26 minutes reflecting interaction of fire spreading to adjacent passenger cars as shown below:

<table>
<thead>
<tr>
<th>TIME (Minutes)</th>
<th>HEAT RELEASE RATE (Million BTU/HR)</th>
<th>SMOKE YIELD RATE (Lbs./Min)</th>
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</tr>
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<tr>
<td>&gt; 26</td>
<td>177.5</td>
<td>28.78</td>
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2. Small: Verify the proposed ventilation system (if designed to rely on thermal buoyancy effects) will satisfactorily handle a fire heat release rate of 2.4 million BTU/hr (0.75 MW) and a smoke yield rate of 0.387 lbs/min, reflecting a smaller trash or electrical fire.

**Illumination**

Lighting shall be provided. Illumination levels of track and walking surfaces shall not be less than 2 foot-candles. Exit lights, essential signs and emergency lights shall be included in an emergency lighting system powered by a standby power system. Unless specific color rendition is required, High-Pressure Sodium (HPS) fixtures should be used for general illumination.

**Egress**

At least one emergency exit stairway shall be provided, and additional exits if required spaced so the distance to an emergency exit shall not exceed 1250 feet. The stairway shall lead directly to outdoors or to a safe refuge area. Signs shall indicate direction and distance to nearest exit. Egress points shall be illuminated. Emergency telephones shall be provided if deemed necessary by the authority having jurisdiction.

**Fire Protection**

A dry fire standpipe system, minimum 4 inch, shall be provided when the length of the overbuild exceeds the maximum length of fire hose (permitted by the local authority having jurisdiction) minus the distance from the portal to the nearest hydrant or approved water source.

**REPORTING**

Not Applicable.

**RESPONSIBILITY**

- Designers of overbuild structures.
  - Comply with standards and procedures.

- **Supervisors of Designers**
  - Ensure compliance with standards and procedures.

- **Chief Engineer, Structures**
  - Ensure compliance.
1. **TEMPORARY PERMISSION.** Temporary permission is hereby granted to

   "Permittee"), to enter property owned and/or controlled by the National Railroad Passenger Corporation

   (hereinafter called "Railroad"), for the purpose of

   at ___________________________, State of ___________________________, under the terms and

   conditions set forth below.

2. **LOCATION AND ACCESS.** (Give map reference, description or both)

   ___________________________

   (hereinafter called "Property").

3. **INDEMNIFICATION.** Permittee shall defend, indemnify and hold harmless Railroad, its

   officers, directors, employees, agents, servants, successors, assigns and subsidiaries, irrespective of their

   negligence or fault, from and against any and all losses and liabilities, penalties, fines, forfeitures,

   demands, claims, causes of action, suits, costs and expenses (including cost of defense and attorneys’

   fees), which any or all of them may hereafter incur, be responsible for, or pay as a result of injury, death,

   disease, or occupational disease to any person, and for damage (including environmental contamination

   and loss of use) to or loss of any property, including property of Railroad, arising out of or in any degree

   directly or indirectly caused by or resulting from activities of or work performed by Permittee, its officers,

   employees, agents, servants, contractors, subcontractors, or any other person acting for or by permission

   of Permittee. The foregoing obligation shall not be limited by the existence of any insurance policy or by

   any limitation on the amount or type of damages, compensation, or benefits payable by or for Permittee or

   any contractor or subcontractor, and shall survive the termination of this Temporary Permit for any

   reason. As used in this paragraph, the term "Railroad" also includes all commuter agencies and other

   railroads with rights to operate over Railroad property, and their respective officers, directors, employees,

   agents, servants, successors, assigns and subsidiaries.

4. **CONSIDERATION FOR PREPARATION OF TEMPORARY PERMIT.** Permittee will pay to

   Railroad the sum of Five Hundred Dollars ($500.00) as compensation for the preparation of this

   Temporary Permit. This fee is to be delivered to Railroad at the address set forth in paragraph 17 hereof.

5. **STARTING OF USE OF PROPERTY.** Permittee shall notify Railroad's Deputy Chief Engineer-

   Construction, or his designee, at least ten (10) days in advance before entering upon, or starting any work

   on, the Property. No entry upon or use of the Property will be permitted until a fully executed copy of

   this Temporary Permit is returned to Railroad, and specific permission to enter upon the Property is

   received by Permittee from Railroad's Director Project Initiation & Development. (See paragraph 17 for

   contact information.)

6. **RAILROAD OPERATIONS.** All activities performed by or on behalf of Permittee shall be

   performed so as not to interfere with Railroad's operations or with any of Railroad's facilities. In no event

   shall personnel, equipment or material cross a track or tracks without special advance permission from

   Railroad's Deputy Chief Engineer-Construction or his designee. If, in the opinion of Railroad's Deputy

   Chief Engineer-Construction or his designee, conditions warrant at any time, Railroad will provide flag

   service and/or other protection at the sole cost and expense of Permittee, and Permittee agrees to pay to

   Railroad the full cost and expense therefor.
7. CLEARANCES. All equipment and material of Permittee shall be kept at all times not less than fifteen (15) feet from the centerline of the outside track, unless specifically otherwise authorized in writing by Railroad's Deputy Chief Engineer-Construction or his designee. Permittee shall conduct all operations so that no part of any equipment shall foul an operated track; transmission, communication or signal line; or any other structure or facility of Railroad.

8. RESTORATION OF PREMISES. Upon completion of its work, Permittee shall, at the option of Railroad, (a) leave the Property in a condition satisfactory to Railroad, or (b) restore the Property to its original condition. This may include, without limitation, the restoration of any fences removed or damaged by Permittee.

9. TERM OF TEMPORARY PERMIT. This Temporary Permit shall commence on the date Railroad receives a fully executed copy of this Temporary Permit pursuant to paragraph 17 hereof and shall extend until the end of the period Railroad determines is necessary for Permittee to accomplish the purpose set forth in paragraph 1 hereof; provided, however, Railroad reserves the right to revoke this Temporary Permit at any time, and in no event shall this Temporary Permit extend beyond __________, 200_. Under no circumstances shall this Temporary Permit be construed as granting to Permittee any right, title or interest of any kind in any property of Railroad.

10. PROTECTION. All work on, over, under, within or adjacent to the Property shall be performed in accordance with the document entitled "SPECIFICATIONS REGARDING SAFETY AND PROTECTION OF RAILROAD TRAFFIC AND PROPERTY," a copy of which is attached hereto as Attachment A and incorporated herein by reference.

11. INSURANCE. Before Permittee commences any work on, over, under, within or adjacent to the Property, Permittee and its contractors (unless Permittee opts to provide the required coverage for them), shall furnish to Railroad’s Director Project Initiation & Development, evidence of the insurance coverages specified in the document entitled "INSURANCE REQUIREMENTS - NATIONAL RAILROAD PASSENGER CORPORATION," a copy of which is attached hereto as Attachment B and incorporated herein by reference.

12. SAFETY ORIENTATION CLASS. No person may enter within twenty-five (25) feet of the Property until he/she has attended Railroad's Safety Orientation Class, as noted in paragraph 12 of Attachment A.

13. COMPLIANCE BY CONTRACTORS. Permittee shall take all steps necessary to ensure that its contractors and subcontractors comply with the terms and conditions of this Temporary Permit.

14. SUPPORT SERVICES: COSTS: PAYMENTS. Railroad shall not be responsible for any costs incurred by Permittee in relation to any matter whatsoever. Permittee is required to reimburse Railroad for all costs incurred by Railroad in relation to this Temporary Permit. Without limiting the foregoing, Permittee is required to reimburse Railroad for all costs incurred by Railroad in connection with the review of any plans, drawings or other submissions made by Permittee.

Railroad's costs, expenses and labor charges will be billed to Permittee at Railroad's standard force account rates. Except as specified in paragraph 4 hereof, all payments due from Permittee to Railroad under this Temporary Permit shall be due and payable within thirty (30) days from the date of invoice. Permittee shall have no right to set off against any payment due under this Temporary Permit any sums which Permittee may believe are due to it from Railroad for any reason whatsoever. In the event that Permittee shall fail to pay, when due, any amount payable by it under this Temporary Permit, Permittee shall also pay to Railroad, together with such overdue payment, interest on the overdue amount at an annual rate of six (6) percentage points over and above the rate published from time to time by The Wall Street Journal as the prime commercial lending rate (or the highest rate allowed by law, if less than the
foregoing), calculated from the date the payment was due until paid. All payments due from Permittee to Railroad hereunder shall be: (a) made by check drawn from currently available funds; (b) deemed made only upon receipt by Railroad of collected funds; (c) made payable to National Railroad Passenger Corporation; and (d) delivered to the National Railroad Passenger Corporation, P.O. Box 18266F, St. Louis, Missouri, 63150. (However, the permit fee referenced in paragraph 4 hereof and the Railroad Protective Liability premium referenced in Attachment B, if applicable, shall be delivered to Railroad at the address set forth in paragraph 17 hereof.) All payment obligations of Permittee under this Temporary Permit shall survive the termination or expiration of this Temporary Permit.

15. ENVIRONMENTAL AND GEOTECHNICAL TESTS AND STUDIES. Permittee shall not perform any environmental or geotechnical tests or studies (e.g., air, soil or water sampling) unless specifically identified and authorized in paragraph 1 of this Temporary Permit. If any such tests or studies are performed, Permittee shall promptly furnish to Railroad, at no cost, a copy of the results including any reports or analyses obtained or compiled. Except as may be required by applicable law or as authorized by Railroad in writing, Permittee shall not disclose the results of any such tests or studies to anyone other than Railroad or Permittee’s client. Failure to comply with the provisions of this clause shall result in immediate termination of this Temporary Permit and forfeiture of all compensation paid Railroad therefor.

16. SEVERABILITY. If any provision of this Temporary Permit is found to be unlawful, invalid or unenforceable, that provision shall be deemed deleted without prejudice to the lawfulness, validity and enforceability of the remainder of the Temporary Permit.

17. ACCEPTANCE. To confirm acceptance of this Temporary Permit, one fully executed copy must be returned to: Director Project Initiation & Development, National Railroad Passenger Corporation, 30th Street Station, Mail Box 64, Philadelphia, PA 19104 (215/349-4971). The second copy may be retained for your file.

NATIONAL RAILROAD PASSENGER CORPORATION

By: 
FRANK A. VACCA  
DEPUTY CHIEF ENGINEER - CONSTRUCTION  

Date: 

AGREED TO AND ACCEPTED:

By: 

(signature)  

Title:  
Must be an Owner/Partner or duly authorized representative  

Date: 

FAV/MAW/JEY
ATTACHMENT A
Temporary Permit to Enter Upon Property

SPECIFICATIONS REGARDING SAFETY
AND PROTECTION OF RAILROAD TRAFFIC AND PROPERTY (Revised 2/3/06)

National Railroad Passenger Corporation (Railroad)

In the following Specifications, "Railroad" shall mean the National Railroad Passenger Corporation; "Chief Engineer" shall mean Railroad's Chief Engineer and/or his duly authorized representative; "Permittee" shall mean the party so identified in the Temporary Permit to Enter Upon Property; and "Contractor" shall mean the entity retained by the Permittee or the entity with whom Railroad has contracted in a Preliminary Engineering Agreement or Force Account Agreement, as applicable.

(1) Pre-Entry Meeting: Before entry of Permittee and/or Contractors onto Railroad's property, a pre-entry meeting shall be held at which time Permittee and/or Contractors shall submit for written approval of the Chief Engineer, plans, computations and a detailed description of proposed methods for accomplishing the work, including methods for protecting Railroad's traffic. Any such written approval shall not relieve Permittee and/or Contractor of their complete responsibility for the adequacy and safety of their operations.

(2) Rules, Regulations and Requirements: Railroad traffic shall be maintained at all times with safety and continuity, and Permittee and/or Contractors shall conduct their operations in compliance with all rules, regulations, and requirements of Railroad (including these Specifications) with respect to any work performed on, over, under, within or adjacent to Railroad's property. Permittee and/or Contractors shall be responsible for acquainting themselves with such rules, regulations and requirements. Any violation of Railroad's safety rules, regulations, or requirements shall be grounds for the immediate suspension of Permittee and/or Contractor work, and the re-training of all personnel, at Permittee’s expense.

(3) Maintenance of Safe Conditions: If tracks or other property of Railroad are endangered during the work, Permittee and/or Contractor shall immediately take such steps as may be directed by Railroad to restore safe conditions, and upon failure of Permittee and/or Contractor to immediately carry out such direction, Railroad may take whatever steps are reasonably necessary to restore safe conditions. All costs and expenses of restoring safe conditions, and of repairing any damage to Railroad’s trains, tracks, right-of-way or other property caused by the operations of Permittee and/or Contractors, shall be paid by Permittee.

(4) Protection in General: Permittee and/or Contractors shall consult with the Chief Engineer to determine the type and extent of protection required to ensure safety and continuity of railroad traffic. Any Inspectors, Track Foremen, Track Watchmen, Flagmen, Signalmen, Electric Traction Linemen, or other employees deemed necessary by Railroad, at its sole discretion, for protective services shall be obtained from Railroad by Permittee and/or Contractors. The cost of same shall be paid directly to Railroad by Permittee. The provision of such employees by Railroad, and any other precautionary measures taken by Railroad, shall not relieve Permittee and/or Contractors from their complete responsibility for the adequacy and safety of their operations.

(5) Protection for Work Near Electrified Track or Wire: Whenever work is performed in the vicinity of electrified tracks and/or high voltage wires, particular care must be exercised, and Railroad’s requirements regarding clearance to be maintained between equipment and tracks and/or energized wires, and otherwise regarding work in the vicinity of electrified tracks, must be strictly observed. No employees or equipment will be permitted to work near overhead wires, except when protected by a Class A employee of Railroad. Permittee and/or Contractors must supply an adequate length of grounding cable (4/0 copper with approved clamps) for each piece of equipment working near or adjacent to any
Fouling of Track or Wire: No work will be permitted within twenty-five (25) feet of the centerline of track or the energized wire or have potential of getting within twenty-five (25) feet of track wire without the approval of the Chief Engineer's representative. Permittee and/or Contractors shall conduct their work so that no part of any equipment or material shall foul an active track or overhead wire without the written permission of the Chief Engineer’s representative. When Permittee and/or Contractors desire to foul an active track, they must provide the Chief Engineer’s representative with their site-specific work plan a minimum of twenty-one (21) working days in advance, so that, if approved, arrangements may be made for proper protection of Railroad. Any equipment shall be considered to be fouling a track or overhead wire when located (a) within fifteen (15) feet from the centerline of the track or within fifteen (15) feet from the wire, or (b) in such a position that failure of same, with or without a load, would bring it within fifteen (15) feet from the centerline of the track or within fifteen (15) feet from the wire and requires the presence of the proper Railroad protection personnel.

If acceptable to the Chief Engineer’s representative, a safety barrier (approved temporary fence or barricade) may be installed at fifteen (15) feet from centerline of track or overhead wire to afford the Permittee and/or Contractor with a work area that is not considered fouling. Nevertheless, protection personnel may be required at the discretion of the Chief Engineer’s representative.

Track Outages: Permittee and/or Contractors shall verify the time and schedule of track outages from Railroad before scheduling any of their work on, over, under, within, or adjacent to Railroad’s right-of-way. Railroad does not guarantee the availability of any track outage at any particular time. Permittee and/or Contractors shall schedule all work to be performed in such a manner as not to interfere with Railroad operations. Permittee and/or Contractors shall use all necessary care and precaution to avoid accidents, delay or interference with Railroad’s trains or other property.

Demolition: During any demolition, Contractor must provide horizontal and vertical shields, designed by a Professional Engineer registered in the state in which the work takes place. These shields shall be designed in accordance with the Railroad's specifications and approved by the Railroad, so as to prevent any debris from falling onto the Railroad's right-of-way or other property. A grounded temporary vertical protective barrier must be provided if an existing vertical protective barrier is removed during demolition. In addition, if any openings are left in an existing bridge deck, a protective fence must be erected at both ends of the bridge to prohibit unauthorized persons from entering onto the bridge.

Ballasted track structure shall be kept free of all construction and demolition debris.

Equipment Condition: All equipment to be used in the vicinity of operating tracks shall be in “certified” first-class condition so as to prevent failures that might cause delay to trains or damage to Railroad's property. No equipment shall be placed or put into operation near or adjacent to operating tracks without first obtaining permission from the Chief Engineer’s representative. Under no circumstances shall any equipment or materials be placed or stored within twenty-five (25) feet from the centerline of an outside track, except as approved by the Site Specific Safety Work Plan. To ensure compliance with this requirement, Permittee and/or Contractors must establish a twenty-five (25) foot foul line prior to the start of work by either driving stakes, taping off or erecting a temporary fence, or providing an alternate method as approved by the Chief Engineer’s representative. Permittee and/or Contractors will be issued warning stickers which must be placed in the operating cabs of all equipment as a constant reminder of the twenty-five (25) foot clearance envelope.

Storage of Materials and Equipment: No material or equipment shall be stored on Railroad’s property without first having obtained permission from the Chief Engineer. Any such storage will be on the condition that Railroad will not be liable for loss of or damage to such materials or equipment from any cause.
If permission is granted for the storage of compressed gas cylinders on Railroad property, they shall be stored a minimum of 25 feet from the nearest track in an approved lockable enclosure. The enclosure shall be locked when the Permittee and/or Contractor is not on the project site.

(11) **Condition of Railroad’s Property**: Permittee and/or Contractors shall keep Railroad’s property clear of all refuse and debris from its operations. Upon completion of the work, Permittee and/or Contractors shall remove from Railroad’s property all machinery, equipment, surplus materials, falsework, rubbish, temporary structures, and other property of Permittee and/or Contractors and shall leave Railroad’s property in a condition satisfactory to the Chief Engineer.

(12) **Safety Training**: All individuals, including representatives and employees of Permittee and/or Contractors, before entering onto Railroad’s property or coming within twenty-five (25) feet of the centerline of the track or energized wire shall first attend Railroad’s Safety Orientation Class. The Safety Orientation Class will be provided by Railroad’s Safety Representative at Permittee’s expense. A photo I.D. will be issued and must be worn/displayed while on Railroad property. All costs of complying with Railroad’s safety training shall be at the sole expense of Permittee. Permittee and/or Contractors shall appoint a qualified person as their Safety Representative. He/she shall continuously ensure that all individuals comply with Railroad’s safety requirements. All safety training records shall be maintained with the site specific work plan.

(13) **No Charges to Railroad**: It is expressly understood that neither these Specifications, nor any document to which they are attached, include any work for which Railroad is to be billed by Permittee and/or Contractors, unless Railroad gives a written request that such work be performed at Railroad’s expense.
ATTACHMENT B
Temporary Permit to Enter Upon Property

INSURANCE REQUIREMENTS
NATIONAL RAILROAD PASSENGER CORPORATION (AMTRAK)
CHICAGO UNION STATION COMPANY (CUSCO)
WASHINGTON TERMINAL COMPANY (WTC)
Revised as of February 2005

DEFINITIONS

In these Insurance Requirements "Railroad" or "Amtrak" shall mean National Railroad Passenger Corporation and as appropriate, its subsidiaries Chicago Union Station Company ("CUSCO") and Washington Terminal Company ("WTC"). "Contractor" shall mean the party identified as "Permittee" in the Temporary Permit to Enter Upon Property Agreement or the party with whom Amtrak has contracted in the Preliminary Engineering Agreement or Force Account Agreement, as well as its officers, employees, agents, servants, contractors, subcontractors, or any other person acting for or by permission of Permittee or Contractor. "Operations" shall mean activities of or work performed by Contractor. "Agreement" shall mean the Temporary Permit to Enter Upon Property Agreement, Preliminary Engineering Agreement, or Force Account Agreement, as applicable.

INSURANCE

Contractor shall procure and maintain, at its sole cost and expense, the types of insurance specified below. Contractor shall evidence such coverage by submitting to Amtrak the original Railroad Protective Liability Policy and certificates of insurance evidencing the other required insurance, prior to commencement of Operations. All insurance shall be procured from insurers authorized to do business in the jurisdiction(s) where the Operations are to be performed. Contractor shall require all subcontractors to carry the insurance required herein, or Contractor may, at its option, provide the coverage for any or all subcontractors, provided the evidence of insurance submitted by Contractor to Amtrak so stipulates. The insurance shall provide for thirty (30) days prior written notice to Amtrak in the event coverage is substantially changed, canceled or non-renewed. All insurance shall remain in force until all Operations are satisfactorily completed (unless otherwise noted below), all Contractor personnel and equipment have been removed from Railroad property, and any work has been formally accepted. Contractor's failure to comply with the insurance requirements set forth herein shall constitute a violation of the Agreement.

Workers' Compensation Insurance complying with the requirements of the statutes of the jurisdiction(s) in which the Operations will be performed, covering all employees of Contractor. Employer's Liability coverage with limits of not less than $1 million each accident or illness shall be included.

In the event the Operations are to be performed on or over navigable waterways, a Longshoremen and Harbor Workers' Compensation Act Endorsement and a Maritime Coverage Endorsement are to be added, including coverage for wages, transportation, maintenance and cure.

Commercial General Liability Insurance covering liability of Contractor with respect to all operations to be performed and all obligations assumed by Contractor under the terms of the Agreement. Products-completed operations, independent contractors and contractual liability coverages are to be included, with the contractual exclusion related to construction/demolition activity within fifty (50) feet of the railroad and any Explosion/Collapse/Subsurface (X-C-D) exclusions deleted. The policy shall name National Railroad Passenger Corporation, as appropriate CUSCO or WTC, and all commuter agencies and railroads that operate over the property or tracks at issue as additional insureds with respect to the operations to be performed. Coverage under this policy shall have limits of liability of not less than $2
Automobile Liability Insurance covering the liability of Contractor arising out of the use of any vehicles which bear, or are required to bear, license plates according to the laws of the jurisdiction in which they are to be operated, and which are not covered under Contractor's Commercial General Liability insurance. The policy shall name National Railroad Passenger Corporation, as appropriate CUSCO or WTC, and all commuter agencies and railroads that operate over the property or tracks at issue as additional insureds with respect to the operations to be performed. Coverage under this policy shall have limits of liability of not less than $1 million each occurrence, combined single limit, for bodily injury and property damage (including loss of use) liability.

In the event Contractor or any subcontractor will be transporting and/or disposing of any hazardous material or waste off of the jobsite, a MCS-90 Endorsement is to be added to this policy and the limits of liability are to be increased to $5 million each occurrence.

Railroad Protective Liability (RRP) Insurance covering the Operations performed by Contractor or any subcontractor within fifty (50) feet vertically or horizontally of railroad tracks. The current ISO Occurrence Form (claims-made forms are unacceptable) in the name of the National Railroad Passenger Corporation (and as appropriate CUSCO or WTC, and all commuter agencies and railroads that operate over the property or tracks at issue) shall have limits of liability of not less than $2 million each occurrence, combined single limit, for Coverages A and B, for losses arising out of injury to or death of all persons, and for physical loss or damage to or destruction of property, including the loss of use thereof. A $6 million annual aggregate shall apply. Additionally, Policy Endorsement CG 28 31 - Pollution Exclusion Amendment, is required to be endorsed onto the policy. Further, "Physical Damage to Property" as defined in the policy is to be deleted and replaced by the following endorsement:

"It is agreed that ‘Physical Damage to Property’ means direct and accidental loss of or damage to all property owned by any named insured and all property in any named insured’s care, custody and control arising out of the acts or omissions of the contractor named on the Declarations.”

The original RRP Liability Insurance Policy must be submitted to Amtrak prior to commencement of Operations.

In the alternative, and upon Amtrak's approval, Contractor may elect to have Amtrak insure the Operations under its Blanket RRP Liability Insurance Program. The premium, which shall be determined by the rate schedule promulgated by the insurer in effect as of the effective date of the Agreement, shall be prepaid by Contractor. In the event Contractor and Amtrak agree to insure the Operations under Amtrak’s RRP Program, Contractor shall include the RRP premium of $ in addition to the Permit Fee, and send its check made payable to National Railroad Passenger Corporation to the individual set forth below prior to commencement of Operations.

All Risk Property Insurance covering physical loss or damage to all property used in the performance of the Operations. The policy shall have limits of liability adequate to cover all property of Contractor (including personal property of others in Contractor's care, custody or control) and shall include a waiver of subrogation against Amtrak, as appropriate CUSCO or WTC, and all commuter agencies and railroads that operate over the property or tracks at issue.

Contractor's Pollution Liability Insurance covering the liability of Contractor arising out of any sudden and/or non-sudden pollution or impairment of the environment, including clean-up costs and defense, that arise from the Operations of Contractor with National Railroad Passenger Corporation, as appropriate CUSCO or WTC, and all commuter agencies and railroads that operate over the property or tracks at issue named as additional insureds. Coverage under this policy shall have limits of liability of not less than $2 million each occurrence with no sunset clause.
Pollution Legal Liability Insurance is required if any hazardous material or waste is to be transported or disposed of off of the jobsite. Contractor, its subcontractor or transporter, as well as the disposal site operator, shall maintain this insurance. Contractor shall designate the disposal site, and must provide a certificate of insurance from the disposal facility to Amtrak. The policy shall name National Railroad Passenger Corporation, as appropriate CUSCO or WTC, and all commuter agencies and railroads that operate over the property or tracks at issue as additional insureds, with limits of liability of not less than $2 million per claim.

Further, any additional insurance coverages, permits, licenses and other forms of documentation required by the United States Department of Transportation, the Environmental Protection Agency and/or related state and local laws, rules and regulations shall be obtained by Contractor.

Professional Liability Insurance covering the liability of Contractor for any and all errors or omissions committed by Contractor in the performance of the Operations, regardless of the type of damages. The coverage shall be maintained during the term of the Operations, and for at least three (3) years following completion thereof. The policy shall have limits of liability of not less than $2 million per claim and in the annual aggregate. The policy may contain a deductible of a maximum of two hundred fifty thousand dollars ($250,000), but in such case the deductible is the sole responsibility of Contractor, and no portion of such deductible is the responsibility of Amtrak.

Contractor may elect to satisfy this requirement through the addition of endorsement CG2279 “Incidental Professional Liability” to its CGL policy.

Claims-Made Insurance - If any liability insurance specified above shall be provided on a claims-made basis, then in addition to coverage requirements above, such policy shall provide that:

1. The retroactive date shall coincide with or precede Contractor’s start of Operations (including subsequent policies purchased as renewals or replacements);
2. The policy shall allow for the reporting of circumstances or incidents that might give rise to future claims;
3. Contractor will use its best efforts to maintain similar insurance under the same terms and conditions that describe each type of policy listed above (e.g., Commercial General Liability, Professional Liability) for at least three (3) years following completion of the Operations; and
4. If insurance is terminated for any reason, Contractor will purchase an extended reporting provision of at least two (2) years to report claims arising from Operations.

Contractor shall furnish evidence of insurance as specified above at least fifteen (15) days prior to commencing Operations. THESE DOCUMENTS SHALL INCLUDE A DESCRIPTION OF THE PROJECT AND THE LOCATION ALONG THE RAILROAD RIGHT-OF-WAY (typically given by milepost designation) IN ORDER TO FACILITATE PROCESSING. The fifteen (15) day advance notice of coverage may be waived by Amtrak in situations where such waiver will benefit Amtrak, but under no circumstances will Contractor begin Operations without providing satisfactory evidence of insurance as approved by Amtrak. Such evidence of insurance coverage shall be sent to:

Director Project Initiation & Development
National Railroad Passenger Corporation
30th Street Station, Mail Box 64
Philadelphia, PA 19104-2817
SECTION 0141A - SAFETY AND PROTECTION OF RAILROAD TRAFFIC AND PROPERTY

PART 1 - GENERAL

1.1 SCOPE

A. This specification describes the safety procedures and protection provisions for Contractors and Permittees entering and working upon railroad property.

B. Use of this specification is as required by Amtrak, as described in Amtrak Engineering Practice EP3014.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.3 DEFINITIONS

A. CHIEF ENGINEER: Amtrak Vice President, Chief Engineer

B. RAILROAD: National Railroad Passenger Corporation (Amtrak), and/or the duly authorized representative

C. ENGINEERING PRACTICE: Amtrak Engineering Practices establish a system of uniform practices, notices and instructions for the Amtrak Engineering Department, providing current, permanent and temporary, departmental procedures and policies.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PRE-ENTRY MEETING

A. Before entry of Permittee and/or Contractors onto Railroad's property, a pre-entry meeting shall be held at which time Permittee and/or Contractors shall submit for written approval of the Chief Engineer, plans, computations and a detailed description of proposed methods for accomplishing the work, including methods for protecting Railroad's traffic. Any such written approval shall not relieve Permittee and/or Contractor of their complete responsibility for the adequacy and safety of their operations.

3.2 RULES, REGULATIONS AND REQUIREMENTS
A. Railroad traffic shall be maintained at all times with safety and continuity, and Permittee and/or Contractors shall conduct their operations in compliance with all rules, regulations, and requirements of Railroad (including these Specifications) with respect to any work performed on, over, under, within or adjacent to Railroad's property. Permittee and/or Contractors shall be responsible for acquainting themselves with such rules, regulations and requirements. Any violation of Railroads safety rules, regulations, or requirements shall be grounds for the immediate suspension of the Permittee and/or Contractor work, and the re-training of all personnel, at the Permittee's expense.

3.3 MAINTENANCE OF SAFE CONDITIONS

A. If tracks or other property of Railroad are endangered during the work, Permittee and/or Contractor shall immediately take such steps as may be directed by Railroad to restore safe conditions, and upon failure of Permittee and/or Contractor to immediately carry out such direction, Railroad may take whatever steps are reasonably necessary to restore safe conditions. All costs and expenses of restoring safe conditions, and of repairing any damage to Railroad's trains, tracks, right-of-way or other property caused by the operations of Permittee and/or Contractors, shall be paid by Permittee.

3.4 PROTECTION IN GENERAL

A. Permittee and/or Contractors shall consult with the Chief Engineer to determine the type and extent of protection required to insure safety and continuity of railroad traffic. Any Inspectors, Track Foremen, Track Watchmen, Flagman, Signalmen, Electric Traction Linemen, or other employees deemed necessary by Railroad, at its sole discretion, for protective services shall be obtained from Railroad by Permittee and/or Contractors. The cost of same shall be paid directly to Railroad by Permittee. The provision of such employees by Railroad, and any other precautionary measures taken by Railroad, shall not relieve Permittee and/or Contractors from their complete responsibility for the adequacy and safety of their operations.

3.5 PROTECTION FOR WORK NEAR ELECTRIFIED TRACK OR WIRE

A. Whenever work is performed in the vicinity of electrified tracks and/or high voltage wires, particular care must be exercised, and Railroad's requirements regarding clearance to be maintained between equipment and tracks and/or energized wires, and otherwise regarding work in the vicinity of electrified tracks, must be strictly observed. No employees or equipment will be permitted to work near overhead wires, except when protected by a Class A employee of Railroad. Permittee and/or Contractors must supply an adequate length of grounding cable (4/0 copper with approved clamps) for each piece of equipment working near or adjacent to any overhead wire.

3.6 FOULING OF TRACK OR WIRE

A. No work will be permitted within twenty-five (25) feet of the centerline of track or the energized wire or have potential of getting within twenty-five (25) feet of track wire without the approval of the Chief Engineer's representative. Permittee and/or Contractors shall conduct their work so that no part of any equipment or material shall foul an active track or overhead wire.
wire without the written permission of the Chief Engineer’s representative. When Permittee and/or Contractors desire to foul an active track, they must provide the Chief Engineer’s representative with their site-specific work plan a minimum of twenty-one (21) working days in advance, so that, if approved, arrangements may be made for proper protection of Railroad. Any equipment shall be considered to be fouling a track or overhead wire when located (a) within fifteen (15) feet from the centerline of the track or within fifteen (15) feet from the wire, or (b) in such a position that failure of same, with or without a load, would bring it within fifteen (15) feet from the centerline of the track or within fifteen (15) feet from the wire and requires the presence of the proper Railroad protection personnel.

B. If acceptable to the Chief Engineer’s representative, a safety barrier (approved temporary fence or barricade) may be installed at fifteen (15) feet from centerline of track or overhead wire to afford the Permittee and/or Contractor with a work area that is not considered fouling. Nevertheless, protection personnel may be required at the discretion of the Chief Engineer’s representative.

3.7 TRACK OUTAGES

A. Permittee and/or Contractors shall verify the time and schedule of track outages from Railroad before scheduling any of their work on, over, under, within, or adjacent to Railroad’s right-of-way. Railroad does not guarantee the availability of any track outage at any particular time. Permittee and/or Contractors shall schedule all work to be performed in such a manner as not to interfere with Railroad operations. Permittee and/or Contractors shall use all necessary care and precaution to avoid accidents, delay or interference with Railroad’s trains or other property.

3.8 DEMOLITION

A. During any demolition, the Contractor must provide horizontal and vertical shields, designed by a Professional Engineer registered in the state in which the work takes place. These shields shall be designed in accordance with the Railroad’s specifications and approved by the Railroad, so as to prevent any debris from falling onto the Railroad’s right-of-way or other property. A grounded temporary vertical protective barrier must be provided if an existing vertical protective barrier is removed during demolition. In addition, if any openings are left in an existing bridge deck, a protective fence must be erected at both ends of the bridge to prohibit unauthorized persons from entering onto the bridge.

3.9 EQUIPMENT CONDITION

A. All equipment to be used in the vicinity of operating tracks shall be in “certified” first-class condition so as to prevent failures that might cause delay to trains or damage to Railroad’s property. No equipment shall be placed or put into operation near or adjacent to operating tracks without first obtaining permission from the Chief Engineer’s representative. Under no circumstances shall any equipment or materials be placed or stored within twenty-five (25) feet from the centerline of an outside track, except as approved by the Site Specific Safety Work Plan. To insure compliance with this requirement, Permittee and/or Contractors must establish a twenty-five (25) foot foul line prior to the start of work by either driving stakes, taping off or erecting a temporary fence, or providing an alternate method as approved.
by the Chief Engineer's representative. Permittee and/or Contractors will be issued warning stickers which must be placed in the operating cabs of all equipment as a constant reminder of the twenty-five (25) foot clearance envelope.

3.10 STORAGE OF MATERIALS AND EQUIPMENT

A. No material or equipment shall be stored on Railroad's property without first having obtained permission from the Chief Engineer. Any such storage will be on the condition that Railroad will not be liable for loss of or damage to such materials or equipment from any cause.

3.11 CONDITION OF RAILROAD'S PROPERTY

A. Permittee and/or Contractors shall keep Railroad's property clear of all refuse and debris from its operations. Upon completion of the work, Permittee and/or Contractors shall remove from Railroad's property all machinery, equipment, surplus materials, falsework, rubbish, temporary structures, and other property of the Permittee and/or Contractors and shall leave Railroad's property in a condition satisfactory to the Chief Engineer.

3.12 SAFETY TRAINING

A. All individuals, including representatives and employees of the Permittee and/or Contractors, before entering onto Railroad's property or coming within twenty-five (25) feet of the centerline of the track or energized wire shall first attend Railroad's Safety Contractor/Leasee Employee Training Class. The Safety Orientation Class will be provided by Railroad's Safety Representative at Permittee's expense. A photo I.D. will be issued and must be worn/displayed while on Railroad property. All costs of complying with Railroad's safety training shall be at the sole expense of Permittee. Permittee and/or Contractors shall appoint a qualified person as their Safety Representative. He/she shall continuously assure that all individuals comply with Railroad's safety requirements. All safety training records shall be maintained with site specific work plan.

3.13 NO CHARGES TO RAILROAD

A. It is expressly understood that neither these Specifications, nor any document to which they are attached, include any work for which Railroad is to be billed by Permittee and/or Contractors, unless Railroad gives a written request that such work be performed at Railroad's expense.

END OF SECTION 01141A
SECTION 01142A - SUBMISSION DOCUMENTATION REQUIRED FOR AMTRAK REVIEW AND APPROVAL OF PLANS FOR BRIDGE ERECTION, DEMOLITION AND OTHER CRANE/ HOISTING OPERATIONS OVER RAILROAD RIGHT-OF-WAY

PART 1 - GENERAL

1.1 SCOPE

A. Amtrak requires that a site-specific work plan for accomplishing hoisting operations be prepared for every applicable project, and for each type of lift on a project.
   1. The plan shall demonstrate adherence to Amtrak safety rules.
   2. The plan shall demonstrate constructibility.
   3. The plan shall minimize impact to rail operations.
   4. The approved plan will provide the basis for field inspection/ verification of the actual work.

B. Preparation, review and approval of the Crane/ Hoisting site-specific work plan does not relieve the Contractor from meeting other Amtrak requirements for adequate planning and documentation of proposed work procedures within the Right-of-Way of the railroad.

C. Current Amtrak safety rules shall be adhered to in every respect.

D. Use of this specification is as required by Amtrak, as described in Amtrak Engineering Practice EP3014.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.3 DEFINITIONS

A. CHIEF ENGINEER: Amtrak Vice President, Chief Engineer

B. RAILROAD: National Railroad Passenger Corporation (Amtrak), and/or the duly authorized representative

C. ENGINEERING PRACTICE: Amtrak Engineering Practices establish a system of uniform practices, notices and instructions for the Amtrak Engineering Department, providing current, permanent and temporary, departmental procedures and policies.

1.4 SUBMISSION REQUIREMENTS

A. Unless otherwise directed in the Contract, the Contractor shall submit five sets of plans and calculations to the authorized representative of the Chief Engineer, Structures, whose name and address will be provided at the project pre-construction meeting.

B. Submitted calculations and plans shall be signed and sealed by a Professional Engineer, registered in the State in which the work will be performed.
C. The Contractor shall revise and resubmit plans and calculations as many times as necessary, until a complete and correct site-specific work plan for crane hoisting operations has been approved.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 THE CONTRACTOR SHALL PROVIDE, AT A MINIMUM, THE FOLLOWING INFORMATION FOR REVIEW AND APPROVAL BY AMTRAK ENGINEERING STRUCTURES:

A. Plan view showing location(s) of cranes, operating radii, with delivery and/or disposal locations shown. Provide all necessary dimensions for locating the elements of the plan.

B. Plans and computations showing the weight of the pick.

C. Crane rating sheets, demonstrating that cranes are adequate for 150% of the calculated pick weight. That is, the cranes shall be capable of picking 150% of the load, while maintaining normal, recommended factors of safety. The adequacy of the crane for the proposed pick shall be determined by using the manufacturer's published crane rating chart and not the maximum crane capacity. Crane and boom nomenclature is to be indicated.

D. Calculations demonstrating that slings, shackles, lifting beams, etc. are adequate for 150% of the calculated pick weight.

E. Location plan showing obstructions, indicating that the proposed swing is possible. "Walking" of load using two cranes will not be permitted. Rather, multiple picks and repositioning of the crane may be permitted to get the load to the needed location for the final pick, if necessary.

F. Data sheet listing types and sizes of slings and other connecting equipment. Include copies of catalog cuts for specialized equipment. Detail attachment methods on the plans.

G. A complete procedure, indicating the order of lifts and any repositioning or re-hitching of the crane or cranes.

H. Temporary support of any components or intermediate stages, as may be required.

I. A time schedule of the various stages, as well as a schedule for the entire lifting process.

END OF SECTION 01142A
NORMAL REQUIREMENTS FOR SHEET PILING ADJACENT TO TRACK

1. EXCAVATIONS WITHIN ZONE 1— ABOVE AND OUTSIDE OF THE THEORETICAL RAILROAD EMBANKMENT LINE— DO NOT NORMALLY REQUIRE SHEETING TO PROTECT RAILROAD ROAD BED. SHEETING MAY BE REQUIRED FOR OTHER REASONS.

2. EXCAVATIONS WHOSE BOTTOMS EXTEND INTO ZONE 2 REQUIRE SHEETING, BUT THE SHEETING MAY NORMALLY BE PULLED AFTER THE EXCAVATION HAS BEEN BACKFILLED.

3. EXCAVATIONS WHOSE BOTTOMS EXTEND INTO ZONE 3 WILL NORMALLY REQUIRE THE SHEETING TO BE LEFT IN PLACE AND CUT-OFF PER REQUIREMENTS.
SECTION 01520A - REQUIREMENTS FOR TEMPORARY PROTECTION SHIELDS FOR DEMOLITION AND CONSTRUCTION OF OVERHEAD BRIDGES AND OTHER STRUCTURES

PART 1 - GENERAL

1.1 SCOPE
A. This engineering practice describes items to be included in the design and construction of temporary protection shields for construction overhead and near to Amtrak tracks.
B. Use of this specification is as required by Amtrak, as described in Amtrak Engineering Practice EP3014.

1.2 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.3 DEFINITIONS
A. CHIEF ENGINEER: Amtrak Vice President, Chief Engineer
B. RAILROAD: National Railroad Passenger Corporation (Amtrak), and/or the duly authorized representative
C. ENGINEERING PRACTICE: Amtrak Engineering Practices establish a system of uniform practices, notices and instructions for the Amtrak Engineering Department, providing current, permanent and temporary, departmental procedures and policies.

1.4 SUBMISSION REQUIREMENTS
A. Unless otherwise directed in the Contract, the Contractor shall submit five sets of plans and calculations to the authorized representative of the Chief Engineer, Structures, whose name and address will be provided at the project pre-construction meeting.
B. Submitted calculations and plans shall be signed and sealed by a Professional Engineer, registered in the State in which the work will be performed.
C. The Contractor shall revise and resubmit plans and calculations as many times as necessary, until a complete and correct site-specific work plan for crane/hoisting operations has been approved.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 CONTRACTORS WORKING ON OVERHEAD OR NEARBY DEMOLITION AND/OR CONSTRUCTION ADJACENT TO AMTRAK TRACKS, SHALL CONFORM TO THE FOLLOWING

...TEMPORARY PROTECTION SHIELDS...
DESIGN AND CONSTRUCTION REQUIREMENTS FOR TEMPORARY PROTECTION SHIELDING:

A. The Contractor shall maintain a specified level of protection to railroad facilities, during demolition and construction activities that occur overhead and nearby Amtrak tracks, as shown on the Contract Plans, as detailed in the Contract Specifications, and as described below.

B. Prior to the start of construction, the Contractor shall submit to Amtrak for review and approval, detailed, site specific plans for temporary protection shields. The plans will be reviewed as to the methods of erection, and as to whether or not the proposed installation will provide the required level of protection. No construction shall proceed until the Contractor has received written approval of the Contractor’s complete, site specific plans, from Amtrak.

C. The Contractor shall design the protection shields to conform to all applicable and governing federal, state and local laws and regulations.

D. Drawings for the proposed temporary protection shields shall be signed and sealed by a Licensed Professional Engineer. Complete design calculations, clearly referenced to the drawings, and easy to review, shall be provided with submission of drawings.

E. Protection shields shall be designed for the following, minimum load and size criteria.
   1. The horizontal shield design live load on horizontal surfaces shall be the greater of a minimum of 100 pounds per square foot (psf) [5000 Pascals] or the anticipated live load to be produced by the Contractor’s anticipated operations. When determining the appropriate design live load, the designer shall consider factors such as the physical capacity of proposed debris-catching platforms to retain materials, and the type of equipment the platforms might support. Positive means of demolition and construction controls shall be provided to assure that debris that may collect on the shield will not exceed the design live load. The horizontal protection shield, in plan view, shall cover no less than the area directly over the tracks plus ten feet minimum beyond the centerline of the outermost tracks.

   2. The vertical shield shall be designed to carry a minimum 30 psf [1500 Pascals] allowance for wind load. The vertical shield shall extend a minimum of 6'-6" (1950 millimeters) above the top of the adjacent surface, such as curb or sidewalk. Anti-climb wings shall be installed at each end, as necessary, to restrict access to the railroad property.

F. The vertical and horizontal clearance envelopes required for maintenance of railroad operations, shall be indicated on the site specific work plans. These clearances are subject to review and approval by Amtrak. If applicable, both temporary and permanent envelopes shall be indicated on the plans. The temporary protection shields shall be installed outside the limits of these minimum vertical and horizontal clearances shown on the site specific work plans.

G. In electrified territory, temporary protection shields shall be bonded and grounded.

H. Temporary protection shields shall be designed and constructed to prevent dust, debris, concrete, formwork, paint, tools, or anything else from falling onto the railroad property below.

I. The temporary protection shields shall be attached to the structure in accordance with site specific work plans submitted by the Contractor and approved by Amtrak. Drilling in structural members and welding will generally not be permitted in members that are scheduled to remain in place in the reconstructed structure. For existing members scheduled for demolition or for later reconstruction, any proposed attachment shall be designed with consideration of potential existing, deteriorated conditions.

J. The Contractor shall provide the Amtrak on-site representative, for review and approval prior to any construction activity in the effected area, a proposed construction schedule for the installation, maintenance and removal of the temporary protection shields.
K. The temporary protection shields shall be installed prior to the start of any other work over the railroad in the effected areas. No construction shall proceed until the Amtrak on-site representative reviews and approves the Contractor's installed protection. Before proceeding with the work, Amtrak must be satisfied, in its sole judgment, that sufficient protection has been provided to proceed with the work.

L. The Contractor shall install and remove temporary protection shields only when an Amtrak representative is on-site.

M. The Contractor shall not install or remove temporary protection shields during train operations.

N. Temporary protection shields shall remain in place for the duration of construction activities over and nearby the railroad in the effected areas. The Contractor may remove temporary construction only after approved by Amtrak on-site representatives.

O. Where site specific conditions impose insurmountable restrictions to the design of temporary construction conforming to the limitations listed above, the design of temporary construction shall be developed in close coordination with Amtrak design review personnel. The Chief Engineer, Structures shall provide final approval of temporary construction that does not conform to the above limitations.

END OF SECTION 01520A
SECTION 02261A - REQUIREMENTS FOR TEMPORARY SHEETING AND SHORING TO SUPPORT AMTRAK TRACKS

PART 1 - GENERAL

1.1 SCOPE

A. This engineering practice describes items to be included in the design and construction of temporary sheeting and shoring construction adjacent and proximate to Amtrak tracks.

B. Use of this specification is as required by Amtrak, as described in Amtrak Engineering Practice EP3014.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.3 DEFINITIONS

A. CHIEF ENGINEER: Amtrak Vice President, Chief Engineer

B. RAILROAD: National Railroad Passenger Corporation (Amtrak), and/or the duly authorized representative

C. ENGINEERING PRACTICE: Amtrak Engineering Practices establish a system of uniform practices, notices and instructions for the Amtrak Engineering Department, providing current, permanent and temporary, departmental procedures and policies.

1.4 SUBMISSION REQUIREMENTS

A. Unless otherwise directed in the Contract, the Contractor shall submit five sets of plans and calculations to the authorized representative of the Chief Engineer, Structures, whose name and address will be provided at the project pre-construction meeting.

B. Submitted calculations and plans shall be signed and sealed by a Professional Engineer, registered in the State in which the work will be performed.

C. The Contractor shall revise and resubmit plans and calculations as many times as necessary, until a complete and correct site-specific work plan for crane/hoisting operations has been approved.

PART 2 - PRODUCTS (Not Used)
PART 3 - EXECUTION

3.1 CONTRACTORS INSTALLING TEMPORARY CONSTRUCTION SHEETING AND SHORING TO SUPPORT AMTRAK TRACKS SHALL CONFORM TO THE FOLLOWING:

A. Footings for all piers, columns, walls, or other facilities shall be located and designed so that any temporary sheeting and shoring for support of adjacent track or tracks during construction, will not be closer than toe of ballast slope. The dimension from gage of rail to toe of ballast, along tangent track, is 7'-5"; see dimensions on Track standard plans for curved track dimensions.

B. USE OF SHEETING: When support of track or tracks is necessary during construction of the above-mentioned facilities, interlocking steel sheeting, adequately braced and designed to carry Cooper E80 live-load plus 50 percent impact allowance is required. Soldier piles and lagging will be permitted for track support ONLY when required penetration of steel sheet piling cannot be obtained, due to site-specific conditions that make steel sheet piling placement impracticable, in the opinion of the authorized, Amtrak design review engineer.

1. For usual soil conditions and limited excavations, sheeting is required when the near-track excavation extends beneath or nearer to the track than the Theoretical Railroad Embankment Line. The Theoretical Railroad Embankment Line is defined as a line that starts at grade, ten foot from the centerline of the outer track, and extends downward, away from the track, at a slope of 1-1/2 horizontal to one vertical.

2. For special soil conditions, such as soft organic soils and rock conditions, and for unusual excavation conditions, temporary supports for excavations may be necessary even when the limits fall beyond the Theoretical Railroad Embankment Line, requiring site specific analysis by a professional, geotechnical engineer.

3. See Sketch SK-1, “Normal Requirements for Sheet Piling Adjacent to Tracks”.

C. Exploratory trenches, three feet deep and 15 inches wide in the form of an “H”, with outside dimensions matching the proposed outside dimensions of sheeting, shall be hand dug, prior to placing and driving the sheeting, in any area where railroad or utility underground installations are known or suspected. These trenches are for exploratory purposes only, and shall be backfilled and immediately compacted, in layers. This work shall be performed only in the presence of a railroad inspector.

D. Absolute use of track is required while driving sheeting adjacent to running track. Track usage shall be prearranged per standard procedures, through the Amtrak project representative.

E. Cavities adjacent to sheet piling, created by pile driving, shall be filled with sand, and any disturbed ballast shall be restored and tamped immediately.

F. Sheet piling cutoffs

1. During construction, sheeting shall be cut off at an elevation no higher than the top of tie.

2. At the completion of construction activities involving the use of sheet piling, sheet piling may be pulled if there will be no adverse impact to the railroad track support bed, as determined by the Amtrak site engineer. This will generally be permitted when both of these conditions are met:
   a. the sheeting face is at least ten feet distant from the centerline of track, and
   b. the bottom of the excavation that the sheeting supported prior to backfilling, does not fall within an assumed influence zone under the tracks. The assumed influence
zone is defined as the area, as seen in cross-sectional view, falling beneath the Theoretical Underground Track Disturbance Line. This line is defined as a line that starts at the end and bottom of the ties, and extends from the track outward and downward at a one-to-one (45-degree) slope.

3. Sheet piling that is to be left in-place, shall be cut off below the ground line 
   a. at least eighteen inches below final ground line at the sheeting, and  
   b. no higher than 24 inches below the elevation of the bottom of the nearest ties  

4. See Sketch SK-1, "Normal Requirements for Sheet Piling Adjacent to Tracks".

G. The excavation adjacent to the track shall be covered, ramped and protected by handrails, barricades and warning lights, as required by applicable safety regulations, and as directed by Amtrak.

H. Final backfilling of excavation shall conform to project specifications.

I. The Contractor shall provide Amtrak with a detailed schedule of proposed construction operations, detailing each step of the proposed temporary construction operations in proximity to Amtrak tracks, so that Amtrak may review and approve the proposed operations, and may properly inspect and monitor operations.

J. Drawings for the proposed temporary sheeting and shoring shall be signed and sealed by a Licensed Professional Engineer. Complete design calculations, clearly referenced to the drawings, and easy to review, shall be provided with submission of drawings.

K. Where site specific conditions impose insurmountable restrictions to the design of temporary construction conforming to the limitations listed above, the design of temporary construction shall be developed in close coordination with Amtrak design review personnel. The Chief Engineer, Structures shall provide final approval of temporary construction that does not conform to the above limitations.

1. When Amtrak grants approval for sheeting closer than standard minimum clearances, the Contractor shall develop a survey plan, if not already required by the project, for the adjacent tracks, to be conducted prior to, during, and after the temporary sheeting construction operations. If settlement is detected, construction operations shall be suspended until the track has been returned to its initial condition, and stabilized, as determined by the Amtrak project site representative.

2. The Contractor shall stockpile ten (10) tons of approved ballast at the project site, and maintain that amount in ready reserve, to allow for the possible need to restore track profile.

L. Particular care shall be taken in the planning, design and execution of temporary construction, as relates to railroad slope protection and drainage facilities. Erosion and sediment control best management practices shall be designed and employed, as approved by Amtrak. Any unintended disruption to railroad drainage facilities, caused by the temporary construction, shall be promptly remedied, as directed by the Engineer, solely at the Contractor's cost.

M. The following Information Sketch is attached:

1. Figure No. SK-1: Normal Requirements for Sheet Piling Adjacent to Track

END OF SECTION 02261A
LEGEND

ZONE 1—ABOVE AND OUTSIDE THE THEORETICAL RAILROAD EMBANKMENT LINE.

ZONE 2—FARHER THAN 10 FEET FROM THE CENTERLINE OF TRACK, BELOW THE THEORETICAL RAILROAD EMBANKMENT LINE AND ABOVE THE THEORETICAL UNDERGROUND TRACK DISTURBANCE LINE.

ZONE 3—BELOW AND INSIDE OF THE THEORETICAL UNDERGROUND TRACK DISTURBANCE LINE.

NORMAL REQUIREMENTS FOR SHEET PILING ADJACENT TO TRACK

1. EXCAVATIONS WITHIN ZONE 1—ABOVE AND OUTSIDE OF THE THEORETICAL RAILROAD EMBANKMENT LINE—DO NOT NORMALLY REQUIRE SHEETING TO PROTECT RAILROAD ROAD BED. SHEETING MAY BE REQUIRED FOR OTHER REASONS.

2. EXCAVATIONS WHOSE BOTTOMS EXTEND INTO ZONE 2 REQUIRE SHEETING, BUT THE SHEETING MAY NORMALLY BE PULLED AFTER THE EXCAVATION HAS BEEN BACKFILLED.

3. EXCAVATIONS WHOSE BOTTOMS EXTEND INTO ZONE 3 WILL NORMALLY REQUIRE THE SHEETING TO BE LEFT IN PLACE AND CUT-OFF PER REQUIREMENTS.
SCOPE AND NATURE

There are many areas along the railroad corridor that are receiving storm water from adjacent property that results in flooding during the smallest of storms. Increased storm water flow to the railroad property increases deposits of excessive amounts of sedimentation and could cause fouling of the track structure. With the introduction of the High Speed Rail Trains, passenger safety is of the utmost importance. Diminished track support from flooding and sedimentation will not be allowed.

It is Amtrak’s policy to limit the resultant discharge and drainage of storm water from the development of adjacent properties to no more than pre-existing conditions, as demonstrated by engineering analyses through governmental regulatory processes.

It is Amtrak’s policy to protect the railroad right-of-way from sediment, erosion and excess runoff during all stages of construction activities on adjacent properties, as demonstrated by engineering analyses through governmental regulatory processes.

SPECIAL REFERENCE

The following policy is to augment Specification 02861 of EP3005, Pipeline Occupancy Requirements and Specifications, and other Amtrak I&C, design and construction standards.

SPECIAL MATERIALS

N/A

PROCEDURE

The discharge of storm water onto railroad property will be prohibited for all construction projects on or adjacent to Railroad property, unless the applicant can demonstrate that there will be a “zero net runoff” result in the peak flow and total volume based on a 100 Year Storm event, and that receiving waters downstream will not be impacted.

Computations indicating this design and suitable topographic plans, prepared by a Professional Engineer, licensed in the state in which the work will be performed, shall be submitted to the Chief Engineer for approval at least 60 days in advance of construction. If the drainage is to discharge into an existing drainage channel on or under the Railroad Right of Way, a hydraulic analysis of the existing structures must be included.

Formal approval of the proposed design, by the appropriate governmental agency or agencies, must be submitted with the computations. Control of soil erosion and sedimentation must be demonstrated on the design plans in accordance with the appropriate state and local regulations.
The Contractor shall be responsible for control of the site and protection of railroad property during the entire construction project, through completion. The design of sedimentation, erosion and runoff control during construction shall accommodate conditions of every phase of construction.

Review, monitoring and approval process:

1. The Contractor shall conform to this Amtrak policy, and demonstrate conformance by standard Amtrak review submissions and approvals, as noted above.

2. Amtrak I&C shall assure that agencies and other third parties proposing construction on or adjacent to Amtrak Right-of-Way conform to Amtrak policy detailed herein.

3. Amtrak Design and Construction shall review the Contractor's proposed design and construction procedures for conformance with Amtrak policy, as demonstrated through appropriate engineering analyses and the government regulatory process.

4. Amtrak Construction shall monitor the activities of the Contractor on-site to assure compliance/adherence to approved procedures throughout the construction period.

REPORTING
N/A

RESPONSIBILITY

<table>
<thead>
<tr>
<th>role</th>
<th>action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amtrak I&amp;C Staff</td>
<td>Comply with Procedure</td>
</tr>
<tr>
<td>Director I&amp;C</td>
<td>Assure Compliance</td>
</tr>
<tr>
<td>Amtrak Design Staff</td>
<td>Comply with Procedure</td>
</tr>
<tr>
<td>Director Structures Design</td>
<td>Assure Compliance</td>
</tr>
<tr>
<td>Amtrak Construction Staff</td>
<td>Comply with Procedure</td>
</tr>
<tr>
<td>Sr. Director Construction</td>
<td>Assure compliance</td>
</tr>
</tbody>
</table>
EXHIBIT B

INSURANCE REQUIREMENTS FOR TEMPORARY PERMIT TO ENTER NATIONAL RAILROAD PASSENGER CORPORATION (AMTRAK)
Revised as of December 2000

DEFINITIONS

Whenever in these Insurance Requirements or in the plans or contract documents the words "Company," "Railroad," or "Amtrak" are used, the same shall mean National Railroad Passenger Corporation. "Contractor" shall be defined as the party identified as "Permittee" in the Permit to Enter Agreement, as well as its officers, employees, agents, servants, contractors, subcontractors, or any other person acting for or by permission of Permittee or the party identified as Contractor in the Preliminary Engineering Agreement or Force Account Agreement, as well as its officers, employees, agents, servants, contractors, subcontractors, or any other person acting for or by permission of Contractor. "Operations" shall be defined as activities of or work performed by Contractor, its officers, employees, agents, servants, contractors, subcontractors, or any other person acting for or by permission of Contractor. "Agreement" shall be defined as the Permit to Enter Agreement, Preliminary Engineering Agreement, and/or Force Account Agreement.

INSURANCE

The Contractor shall procure and maintain, at its sole cost and expense, the types of insurance specified below. Contractor shall evidence such coverage by submitting Certificate(s) of Insurance for Workers' Compensation, Commercial General Liability and Automobile Liability, and the original Railroad Protective Liability Policy, prior to commencement of Operations. All insurance shall be procured from insurers authorized to do business in the jurisdiction(s) where the Operations are to be performed. The Contractor shall require all subcontractors to carry the insurance required herein, or Contractor may, at its option, provide the coverage for any or all subcontractors, provided the evidence of insurance submitted by Contractor to Amtrak so stipulates. The insurance specified below shall provide for thirty (30) days prior written notice to Amtrak in the event coverage is substantially changed, canceled or non-renewed. All insurance specified below shall remain in force until all Operations are satisfactorily completed, all contractor personnel and equipment have been removed from railroad property, and any work has been formally accepted. Contractor's failure to comply with the insurance requirements set forth herein shall constitute a violation of this Agreement.
Workers’ Compensation Insurance complying with the requirements of the statutes of the jurisdiction(s) in which the Operations will be performed, covering all employees of Contractor. Employer’s Liability coverage with limits of not less than $1 million each accident or illness shall be included.

In the event the Operations are to be performed on or over navigable waterways, a Longshoremen and Harbor Workers’ Compensation Act Endorsement and a Maritime Coverage Endorsement are to be added, including coverage for wages, transportation, maintenance and cure.

Commercial General Liability Insurance covering liability of the Contractor with respect to all Operations to be performed and all obligations assumed by the Contractor under the terms of this Agreement. Products-completed operations, independent contractors and contractual liability coverages are to be included, with the contractual exclusion related to construction/demolition activity within fifty (50) feet of the railroad and any X-C-U exclusions deleted. The policy shall name Amtrak as an additional insured with respect to the Operations to be performed. Coverage under this policy, or policies, shall have limits of liability of not less than $2 million per occurrence, combined single limit, for bodily injury (including disease or death), personal injury and property damage (including loss of use) liability.

Automobile Liability Insurance covering the liability of Contractor arising out of the use of ANY VEHICLES which bear, or are required to bear, license plates according to the laws of the jurisdiction in which they are to be operated, and which are not covered under the Contractor’s Commercial General Liability insurance. The policy shall name Amtrak as an additional insured with respect to the Operations to be performed. Coverage under this policy shall have limits of liability of not less than $1 million per occurrence, combined single limit, for bodily injury and property damage (including loss of use) liability.

Railroad Protective Liability Insurance covering the Operations performed by Contractor or any subcontractor within fifty (50) feet vertically or horizontally of railroad tracks. The AAR-AASHTO (ISO/RIMA) Occurrence Form (claims-made forms are unacceptable) in the name of the National Railroad Passenger Corporation (and any other railroad operating over the tracks) shall have limits of liability of not less than $2 million per occurrence, combined single limit, for Coverages A and B, for losses arising out of injury to or death of all persons, and for physical loss or damage to or destruction of property, including the loss of use thereof. A $6 million annual aggregate shall apply. Additionally, Policy Endorsement CG 28 31 - Pollution Exclusion Amendment, is required to be endorsed onto the policy.
Further, "Physical Damage to Property" as defined in the policy is to be deleted and replaced by the following endorsement:

"It is agreed that Physical Damage to Property is amended to read as follows:

Physical Damage to Property means direct and accidental loss of or damage to all property owned by any named insured and all property in any named insured’s care, custody and control arising out of the acts or omissions of the Contractor named on the Declarations.

The original Railroad Protective Liability Insurance Policy must be submitted to Amtrak prior to commencement of Operations.

In the alternative, and upon Amtrak’s approval, Contractor may elect to have Amtrak insure the Operations under its Blanket Railroad Protective Liability Insurance Program (RRP). The premium, which shall be determined by the rate schedule promulgated by the insurer in effect as of the effective date of the Agreement, shall be prepaid by the Contractor. In the event Contractor and Amtrak agree to insure the Operations under Amtrak’s RRP, Contractor shall include RRP premium of $ in addition to the Permit Fee, and send its check made payable to National Railroad Passenger Corporation to the individual set forth below prior to commencement of Operations.

**All Risk Property Insurance** covering physical loss or damage to all property used in the performance of the Operations. The policy shall have limits of liability adequate to cover all property of the Contractor (including personal property of others in Contractor’s care, custody or control) and include a waiver of subrogation against Amtrak.

**Claims-Made Insurance**

If any liability insurance specified above shall be provided on a claims-made basis, then in addition to coverage requirements above, such policy shall provide that:

1. The retroactive date shall coincide with or precede Contractor’s start of Operations (including subsequent policies purchased as renewals or replacements);

2. The policy shall allow for the reporting of circumstances or incidents that might give rise to future claims;
3. Contractor will use its best efforts to maintain similar insurance for at least three (3) years following completion of the Operations, including the requirement of adding National Railroad Passenger Corporation as an additional insured; and

4. If insurance is terminated for any reason, Contractor agrees to purchase an extended reporting provision of at least two (2) years to report claims arising from Operations performed in connection with the Agreement.

The Contractor shall furnish evidence of insurance as specified above fifteen (15) days prior to commencing Operations. THESE DOCUMENTS SHALL INCLUDE A DESCRIPTION OF THE PROJECT AND THE LOCATION ALONG THE RAILROAD RIGHT-OF-WAY (typically given by milepost designation) IN ORDER TO FACILITATE PROCESSING. The fifteen (15) day advance notice of coverage may be waived by Amtrak in situations where such waiver will benefit Amtrak, but under no circumstances will the Contractor begin Operations without providing satisfactory evidence of insurance as approved by Amtrak. Such evidence of insurance coverage shall be sent to:

Director of I&C Projects
National Railroad Passenger Corporation
30th Street Station, 3rd Floor, South Tower, Box 64
Philadelphia, PA 19104-2817
SPECIFICATIONS
FOR
WIRE, CONDUIT AND CABLE OCCUPATIONS
OF
NATIONAL RAILROAD PASSENGER CORPORATION
PROPERTY
# INDEX

<table>
<thead>
<tr>
<th>SUBJECT</th>
<th>PAGE NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SCOPE</td>
<td>1</td>
</tr>
<tr>
<td>2. APPLICATION</td>
<td>1</td>
</tr>
<tr>
<td>3. APPROVAL OF PLANS</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>4. CONSTRUCTION REQUIREMENTS</td>
<td>3</td>
</tr>
<tr>
<td>5. LONGITUDINAL OCCUPATIONS</td>
<td>4</td>
</tr>
<tr>
<td>6. INDUCTIVE INTERFERENCE</td>
<td>4</td>
</tr>
</tbody>
</table>

## APPENDIX

<table>
<thead>
<tr>
<th>PLATE</th>
<th>PAGE NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLATE I</td>
<td>5</td>
</tr>
<tr>
<td>PLATE II</td>
<td>6</td>
</tr>
<tr>
<td>PLATE IIA</td>
<td>7</td>
</tr>
<tr>
<td>PLATE III</td>
<td>8</td>
</tr>
<tr>
<td>PLATE IV</td>
<td>9</td>
</tr>
<tr>
<td>PLATE V</td>
<td>10</td>
</tr>
</tbody>
</table>
1. **SCOPE:**

   A. These specifications apply to the design of electric transmission wires, cables, and conduits (power or communication) which are to be located over, under, across or upon Railroad property and facilities and tracks owned by others over which the Railroad operates its equipment.

2. **APPLICATION FOR OCCUPANCY**

   A. Individuals, corporations, municipalities (known as the owner) desiring occupancy of Railroad property by such wire, cable, or conduit occupations must agree, upon approval of the construction drawings by the Office of the Chief Engineer of the Railroad, to execute an appropriate occupational agreement and pay any required fees and/or rentals outlined therein.

   B. Application for an occupancy shall be by letter addressed to:

   Commercial Development  
   National Railroad Passenger Corporation  
   30th and Market Streets, 5th Floor South  
   Philadelphia, PA 19104

   giving the following:

   1) Name of individual, corporation or municipality desiring the occupancy.

   2) Complete mailing address of applicant.

   3) Name and title of person who will sign the agreement.

   4) The State in which the applicant is incorporated.

   C. All applications shall be accompanied with eight (8) copies of all construction plans and three (3) copies of specifications and computations concerning the proposed occupancy.
3. **APPROVAL OF PLANS**

A. No entry upon Railroad property for the purpose of conducting surveys, field inspections, obtaining soil information, or any other purpose associated with the design and engineering of the proposed occupancy, will be permitted without a proper entry permit (Form CR-17) prepared by the office of the Chief Engineer of the Railroad and executed by the applicant. It is to be clearly understood that the issuance of such a permit does not constitute authority to proceed with the actual construction which cannot begin until a formal agreement is finally executed by the Railroad Company and permission is received by the owner from the designated inspection agency of the Railroad to proceed.

B. Plans for proposed wire, cable, or conduit occupations shall be submitted to and meet the approval of the Chief Engineer of the Railroad prior to start of construction. These plans are to be prepared in sizes as small as possible and are to be folded to an 8½ inch by 1 inch size (folded dimensions) with a 1½ inch margin on the left-hand side and a 1 inch margin on the top so that they can be secured in a file at the upper left-hand corner and still be unfolded to full size without being removed from the file.

Also, after folding, the title block and other identification of the plans shall be visible without the necessity of unfolding at the lower right-hand corner. Each plan shall bear an individually identifying number and an original date, together with subsequent revision dates, clearly identified on the plan so as to be readily apparent as to just what revisions were made and when.

All plans are to be individually folded and where more than one plan is involved, they shall be assembled into complete sets before submission to the Railroad.

C. Plans shall be drawn to scale and show the following:
(See Plates I, II, IIA, III, IV and V, hereto attached)

1) Plan review of crossing or occupation in relation to all Railroad facilities (See Plate I).
2) Location of wire, cable, or conduit (in feet) from nearest Railroad Mile Post, centerline of a Railroad bridge (giving bridge number), or center line of an existing or former passenger station. In all cases, the name of the County in which the proposed facilities are located must be shown. In States where Townships, Ranges and Sections are used, give distance in feet to the nearest Section line and identify the Section number, Township and Range.

3) Profile of ground on center line of pole or tower line, showing clearances between top of rail and bottom of sag, as well as clearances from bottom wire or cable to top wire or cable of the Railroad's static, transmission, signal, trolley feeder and communication lines, catenary, and third rail, when present. If none of these facilities are in existence at the point of crossing, the plan should so indicate. Actual under-clearances are to be shown (See Plate V for the minimum required clearances in non-electrified territory).

4) Show all known property lines. If wires, cables or conduits are within public highway limits, such limits should be clearly indicated with dimensions from center line.

5) The plan must be specific, as to:

a. Base diameter, height, class and bury of poles. Poles shall be set no closer than 18'-0" from face of pole to center line of nearest track. When necessary, however, each location will be analyzed to consider speed, traffic, etc.

b. Number of size, and material of power wires, as well as number of pairs in communication cables.

c. Nominal voltage of line.

d. Number of, location, size of, material of anchors and all guying for poles and arms.
NOTES: Double cross-arms and deadends with backguys are required on poles adjacent to track where wires or cable are crossing tracks (See Plate IIA). Any tower designs must be accompanied by engineering computations and data.

4. CONSTRUCTION REQUIREMENTS

A. Power and communication lines shall be constructed in accordance with Amtrak's Electrification Standards and "Safety Rules for the Installation and Maintenance of Electric Supply and Communication Lines, National Electrical Safety Code Handbook", (current issue). Casing pipes to contain power or communication wires or cables having an outside diameter of over four (4) inches shall be constructed in accordance with the current issue of Amtrak’s “Requirements and Specifications for Pipeline Occupancy”, USA, ENG 1604 dated November 1987.

B. Under special conditions, Railroad will give consideration to occupations on its catenary structures, subject to the approval of the Chief Engineer, and the Railroad’s policy governing such matters.

5. LONGITUDINAL OCCUPATIONS

Wires and cables running longitudinally along Railroad right of way shall be constructed as close to Railroad property lines as possible. For electrical power wires and cables with voltages of 34,500 or over and communication cables containing over 1800 pairs, the following information must be submitted in addition to the detail of the pole to configuration as called for on Plate IV of these specifications:

a. Voltage of circuit(s) or number of pairs.
b. Phase of electrical circuit(s).
c. Number of electrical circuits.
d. Size (AWG or CM) and material of wires or cables.
e. Length of spans clearly indicated on drawing.
Any facilities overhanging Railroad property must have approval of the Railroad and appropriate rental charges will be applied.

6. **INDUCTIVE INTERFERENCE**

On agreements covering occupations, provisions will be included that the applicant will conduct appropriate EMI/EMF studies and provide appropriate remedies, at his own expense, to correct any inductive interference with Railroad facilities.
INFORMATION TO BE SHOWN ON PLAN SECTION OF DRAWINGS

WHEN FACILITY IS A CROSSING

SHOW HIGHWAY LIMITS
(PARAGRAPH 3C(4), PAGE 2)

RAILROAD RIGHT OF WAY
TO BE SHOWN

PROPOSED LINE

TO (R.R. STATION)

SHOW NAME OF HIGHWAY

TO (R.R. STATION)

RAILROAD COMMUNICATION LINE, SIGNAL LINE, MCI,
AT&T OR MFS FIBER CABLES.

C.I.H.

SHOW COMMUNICATION & SIGNAL HOUSES

SHOW PROPERTY LINE

INDICATE LENGTH OF SPAN
OVER TRACKS

SEE PARAGRAPH 3C(2), PAGE 2

SCALE OF DRAWING TO BE SHOWN

NOTE:

ALL RAILROAD ELECTRIFICATION FACILITIES MUST BE SHOWN IN RELATION TO PROPOSED LINE.

IF THE PROPOSED LINE IS TO SERVE A NEW DEVELOPMENT, A MAP SHOWING THE AREA IN
RELATION TO ESTABLISHED AREAS AND ROADS IS TO BE SENT WITH THE REQUEST.

IF THE PROPOSED LINE IS NOT WHOLLY (OR PARTIALLY) WITHIN HIGHWAY LIMITS, THE SAME
INFORMATION IS REQUIRED AS SHOWN ON THIS PLATE.

* DIMENSIONS TO BE SUPPLIED BY OWNER

OFFICE OF
V.P., Chief Engineer
Engineering

Amtrak
National Railroad Passenger Corporation
30th Street Station—Philadelphia, Pennsylvania 19104

C.E. SPECIFICATIONS
STANDARD CLEARANCES FOR WIRES
HIGHWAY CROSSING RAILROADS

Approved  Date

A.C.E. Electric In traction

Director Electric In traction

Designed  Drawn  Drafted  Date

11-11-97
INFORMATION TO BE SHOWN ON PROFILE SECTION OF DRAWINGS

IN CASES OF CROSSING NON-ELECTRIFIED RAILROADS

SHOW NUMBER OF WIRES IN PROPER PROSPECTIVE, VOLTAGE, POWER, GROUND, & NEUTRAL WIRES, ETC.

BOTTOM OF SAG, 60' F.
(SEE NOTE)

SEE PARAGRAPH 3c(3), PAGE 2

DOUBLE DEAD END CONDUCTOR AND STATIC WIRE

BACK GUY

RAILROAD POLE LINE OR DUCT BANK

LENGTH OF CROSS ARM

POLE TOP CONFIGURATION TO BE SHOWN

TOP OF HIGH RAIL

SECTIONS LOOKING__________(DIRECTION)

SCALE: H__________

SCALE: V__________

NOTES:

1. ALL TRANSMISSION, STATIC, CATEINARY, FEEDERS, COMMUNICATION LINES AND THIRD RAIL SHOULD BE INDICATED AND THE PROPER CLEARANCES SHOWN.
   (SEE PLATE 11A)

2. SHOW MAXIMUM SAG INCREASE OF POWER WIRES OVER TRACKS IF THE SPAN EXCEEDS 175 FEET IN LENGTH.

3. DOUBLE DEAD END ALL CROSSING WIRES ON BOTH SIDES OF THE RAILROAD AND PROVIDE BACK GUYS AWAY FROM THE RAILROAD.

* DIMENSIONS TO BE SUPPLIED BY OWNER

Amtrak
V.P., Chief Engineer

OFFICE OF V.P., Chief Engineer

Engineering

C.E. SPECIFICATIONS

STANDARD CLEARANCES FOR WIRES CROSSING NON-ELECTRIFIED RAILROADS

Approved Date
A.C.E. Electric Traction

Add
Director Electric Traction

Drawn By

Officed By

Date 2-11-97

C.E. 4

2/10/97

PLATE II

H. C. 4
INFORMATION TO BE SHOWN ON PROFILE SECTION OF DRAWINGS

IN CASES OF CROSSING ELECTRIFIED RAILROADS

ANCILLARY CONDUCTORS (SIGNAL LINE, FEEDERS, ETC.)

COMMUNICATION AND SIGNAL DUCT BANK TO BE SHOWN WHERE APPLICABLE.

DOUBLE DEAD END CONDUCTOR AND STATIC WIRE

BACK GUY

CATENARY

TYPICAL ARRANGEMENT OF RAILROAD CONDUCTORS

WIRE CLEARANCES FOR VOLTAGES ABOVE 25 KV

<table>
<thead>
<tr>
<th>VOLTAGE</th>
<th>MINIMUM VERTICAL CLEARANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>34,500</td>
<td>8'-6&quot;</td>
</tr>
<tr>
<td>69,000</td>
<td>9'-6&quot;</td>
</tr>
<tr>
<td>115,000</td>
<td>11'-6&quot;</td>
</tr>
<tr>
<td>138,000</td>
<td>12'-0&quot;</td>
</tr>
<tr>
<td>230,000</td>
<td>15'-0&quot;</td>
</tr>
<tr>
<td>345,000</td>
<td>19'-0&quot;</td>
</tr>
<tr>
<td>500,000</td>
<td>24'-0&quot;</td>
</tr>
<tr>
<td>745,000</td>
<td>32'-6&quot;</td>
</tr>
<tr>
<td>765,000</td>
<td>33'-0&quot;</td>
</tr>
</tbody>
</table>

NOTES:
1. MINIMUM CLEARANCE IS CALCULATED AT WORST CASE WIRE SAG. (RESULT OF MAXIMUM OPERATING TEMPERATURE, ICE LOADING, ETC.)
2. THE ABOVE DIAGRAM SHOWS A TYPICAL UTILITY CROSSING ON THE NEW YORK TO WASHINGTON CORRIDOR. ALL UTILITY CROSSINGS ON THE NORTH END ELECTRIFICATION PROJECT WILL BE ABOVE THE HIGHEST RAILROAD CONDUCTOR.
3. STEEL POLES OR TOWERS THAT CAN SUPPORT BROKEN CONDUCTOR LOADS MAY NOT NEED TO BE GUAYED PENDING APPROVAL FROM AMTRAK.
INFORMATION TO BE SHOWN ON PLAN SECTION OF DRAWINGS IN CASES OF LONGITUDINAL OCCUPATIONS

RAILROAD RIGHT OF WAY TO BE SHOWN

RAILROAD SIGNAL & COMMUNICATIONS LINE (IF NONE, SO STATE)

TO (R.R. STATION)

CENTER LINE OF TRACKS

TRACK ID

PROPOSED LINE

RAILROAD RIGHT OF WAY TO BE SHOWN

SCALE OF DRAWING TO BE SHOWN

NOTE:
(1) EACH END OF THE LINE MUST SHOW MEASUREMENTS AS CALLED FOR IN PARAGRAPH 3C(2), PAGE 2.
(2) IF POWER LINE CROSSES ANY TRACK, THEN THE INFORMATION SHOWN ON PLATE 1 IS ALSO REQUIRED.
(3) WHERE ANCHOR GUYS ARE REQUIRED, SEE PARAGRAPH 3C(3), PAGE 2.
(4) THE DISTANCE BETWEEN EACH POLE IS TO BE SHOWN.
(5) ASSIGNED POLE NUMBERS TO BE SHOWN AT EACH POLE.

* DIMENSIONS TO BE SUPPLIED BY OWNER

C.E. SPECIFICATIONS
STANDARD INFORMATION FOR WIRES IN CASES OF LONGITUDINAL OCCUPATIONS
INFORMATION TO BE SHOWN ON PROFILE SECTION OF DRAWINGS

IN CASES OF LONGITUDINAL OCCUPATIONS

- Pole Numbers
- Elevation
- Apparent Sag at 60°F.
- Top of Rail Elevation of Adjacent Track
- Distance Between Poles to be Shown
- Length of Cross Arms
- Pole Top Configuration to be Shown Similar to Samples Above

Note: If power line crosses any track, then information shown on Plate II is also required.

* Dimensions to be supplied by owner

Amtrak
Office of V.P., Chief Engineer Engineering
National Railroad Passenger Corporation
30TH Street Station, Philadelphia, Pennsylvania 19104

C.E. Specifications
Standard Clearances for Wires in Cases of Longitudinal Occupations

Approved Date
A.C.E. Electric Traction
Designated

Director Electric Traction
Drawn

By:
Checked

Date 2-10-97
## NON - ELECTRIFIED TERRITORY

<table>
<thead>
<tr>
<th>VOLTAGE</th>
<th>OVERHEAD CLEARANCE (TOP OF RAIL TO BOTTOM OF SAG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-750</td>
<td>27'-0&quot;</td>
</tr>
<tr>
<td>751-15,000</td>
<td>28'-0&quot;</td>
</tr>
<tr>
<td>15,001-50,000</td>
<td>30'-0&quot;</td>
</tr>
<tr>
<td>69,000</td>
<td>30'-8&quot;</td>
</tr>
<tr>
<td>115,000</td>
<td>32'-2&quot;</td>
</tr>
<tr>
<td>138,000</td>
<td>33'-0&quot;</td>
</tr>
<tr>
<td>345,000</td>
<td>39'-10&quot;</td>
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<tr>
<td>500,000</td>
<td>45'-0&quot;</td>
</tr>
<tr>
<td>745,000</td>
<td>53'-2&quot;</td>
</tr>
<tr>
<td>765,000</td>
<td>53'-10&quot;</td>
</tr>
</tbody>
</table>

Calculation is 30'-0" + 0.4" per 1,000 volts over 50,000 volts
SCOPE AND NATURE

To establish a uniform policy for blasting on and adjacent to Amtrak's Right-of-Way.

SPECIAL REFERENCE

Note: The former number for this engineering practice is 208.

SPECIAL MATERIALS

N/A

PROCEDURE

Blasting is restricted on and adjacent to Amtrak's Right-of-Way. Approval to blast must be given by the Assistant Vice President or Chief Engineer of the appropriate discipline.

Requests for approval to blast must provide the information requested below and conform to all requirements listed:

1. Provide a site plan defining the blast area and location of nearest or other related structure.

2. Provide a soil and rock profile of the blast zone.

3. Limit the peak particle velocity to two inches per second, except for certain sensitive areas, such as tunnels, bridge piers and abutments, oilostatic duct lines, central instrument houses and underpinning. For these sensitive areas, limit maximum peak particle velocity to between 0.5 inches per second and one inch per second, depending on the facility.

4. Maintain a scale distance of 50 when maximum peak particle velocity is two inches per second. Maintain an initial scale distance of 60 when maximum peak particle velocity is limited to a range of 0.5 inches per second to one inch per second. This initial scale distance may be adjusted to 50 after the initial blast, if conditions permit.

   Scale distance = \( \frac{\text{Distance from blast to structure (in feet)}}{\sqrt{\text{Weight of explosives per delay (in pounds)}}} \)

5. Use a non-electric detonation system whenever possible.
   
a. If electric caps are used, a check must be made for stray currents, induced current and radio frequency energy to ensure that this hazardous, extraneous electricity is at an acceptable level.
b. Amtrak uses two-way radios for trains control. The radios operate at 160 MHz range, and cannot be turned off during the charging and priming operation.

6. Provide an open face for maximum relief for burden.

7. Obtain the services of a qualified vibration and blasting consultant to monitor all blasting activity.

8. All blasting operations must be coordinated with Amtrak’s Senior Project Engineer on the site.

9. A pre-blast and post-blast survey may be obtained. The survey will include photographs and an inspection of all nearby, Amtrak owned and other facilities. The survey will be used to determine any changes that occurred due to the blasting operation.

REPORTING

N/A

RESPONSIBILITY

Area Construction Engineer
Comply with procedure

Senior Director Construction
Assure compliance with procedure

Asst. Vice President Engineering
Approval to Blast Required

or Chief Engineer, Structures
2.1.5.1 Adjacent to Railroad Tracks

To limit damage by the redirection and deflection of railroad equipment, piers supporting bridges over railways and with a clear distance of less than 25 feet from the centerline of a railroad track shall be of heavy construction (defined below) or shall be protected by a reinforced concrete crash wall. Crash walls for piers from 12 to 25 feet clear from the centerline of track shall have a minimum height of 6 feet above the top of rail. Piers less than 12 feet clear from the centerline of track shall have a minimum crash wall height of 12 feet above the top of rail.

The crash wall shall be at least 2 feet, 6 inches thick and at least 12 feet long. When two or more columns compose a pier, the crash wall shall connect the columns and extend at least 1 foot beyond the outermost columns parallel to the track. The crash wall shall be anchored to the footings and columns, if applicable, with adequate reinforcing steel and shall extend to at least 4 feet below the lowest surrounding grade.

Piers shall be considered of heavy construction if they have a cross-sectional area equal to or greater than that required for the crash wall and the larger of its dimensions is parallel to the track.

Consideration may be given to providing protection for bridge piers over 25 feet from the centerline of track as conditions warrant. In making this determination, account shall be taken of such factors as horizontal and vertical alignment of the track, embankment height, and an assessment of the consequences of serious damage in the case of a collision.

2.1.5.2 Over Navigable Streams

Piers located adjacent to channels of navigable waterways shall have a protection system in accordance with Part 23, this chapter.

2.2 NOTATIONS, DEFINITIONS AND DESIGN LOADS

2.2.1 Notations

\[ a = \text{depth of equivalent rectangular stress block, inches. See Article 2.31.1(f)} \]

\[ a_b = \text{depth of equivalent rectangular stress block for balanced strain conditions, inches. See Article 2.33.2(c)} \]

\[ a_v = \text{shear span, distance between concentrated load and face of support—Articles 2.29.7 and 2.35.7} \]

\[ A = \text{effective tension area of concrete surrounding the main tension reinforcing bars and having the same centroid as that reinforcement, divided by the number of bars, square inches. When the main reinforcement consists of several bar sizes the number of bars shall be computed as the total steel area divided by the area of the largest bar used—Article 2.39} \]

\[ A_b = \text{area of an individual bar, square inches—Article 2.14} \]

\[ A_c = \text{area of core spirally reinforced compression member measured to the outside diameter of the spiral, square inches—Article 2.11.2} \]

\[ A_f = \text{area of reinforcement in bracket or corbel resisting moment, sq. in.—Articles 2.29.7 and 2.35.7} \]

\[ A_g = \text{gross area of section, square inches} \]

\[ A_h = \text{area of shear reinforcement parallel to flexural tension reinforcement, sq. in.—Articles 2.29.7 and 2.35.7} \]
2.1.3 HIGHWAY BRIDGES (1994)

Unless otherwise specified by highway authority, all highway bridges shall be designed in accordance with the latest Standard Specifications for Highway Bridges adopted by the American Association of State Highway and Transportation Officials.

2.1.4 BUILDINGS (1994)

Unless otherwise specified by local governing ordinances or state codes, all railway buildings shall be designed in accordance with the latest "Building Code Requirements for Reinforced Concrete (ACI 318)" of the American Concrete Institute, subject to design loads conforming to railway requirements.

2.1.5 PIER PROTECTION (1994)

2.1.5.1 Adjacent to Railroad Tracks

a. To limit damage by the redirection and deflection of railroad equipment, piers supporting bridges over railways and with a clear distance of less than 25 feet from the centerline of a railroad track shall be of heavy construction (defined below) or shall be protected by a reinforced concrete crash wall. Crash walls for piers from 12 to 25 feet clear from the centerline of track shall have a minimum height of 6 feet above the top of rail. Piers less than 12 feet clear from the centerline of track shall have a minimum crash wall height of 12 feet above the top of rail.

b. The crash wall shall be at least 2'-6" thick and at least 12 feet long. When two or more columns compose a pier, the crash wall shall connect the columns and extend at least 1 foot beyond the outermost columns parallel to the track. The crash wall shall be anchored to the footings and columns, if applicable, with adequate reinforcing steel and shall extend to at least 4 feet below the lowest surrounding grade.

c. Piers shall be considered of heavy construction if they have a cross-sectional area equal to or greater than that required for the crash wall and the larger of its dimensions is parallel to the track.

d. Consideration may be given to providing protection for bridge piers over 25 feet from the centerline of track as conditions warrant. In making this determination, account shall be taken of such factors as horizontal and vertical alignment of the track, embankment height, and an assessment of the consequences of serious damage in the case of a collision.

2.1.5.2 Over Navigable Streams

Piers located adjacent to channels of navigable waterways shall have a protection system in accordance with Part 23, Pier Protection Systems at Spans Over Navigable Streams.

---

1 See Commentary
Figure C-1. Pier Protection: Minimum Crash Wall Requirements (Not To Scale)
1. **TEMPORARY PERMISSION.** Temporary permission is hereby granted to __________________________ (hereinafter called "Permittee"), to enter property owned and/or controlled by the National Railroad Passenger Corporation (hereinafter called "Railroad"), for the purpose of __________________________

at __________________________, State of __________________________, under the terms and conditions set forth below:

2. **LOCATION AND ACCESS.** (Give map reference, description or both)

________________________

(hereinafter called "Property").

3. **INDEMNIFICATION.** Permittee agrees to provide the indemnification set forth below unless it is statutorily prohibited from doing so, in which event Permittee will assure that each of its contractor(s) provides such indemnification:

Permittee agrees to defend, indemnify and hold harmless Railroad, its officers, directors, employees, agents, servants, successors, assigns and subsidiaries, irrespective of their negligence or fault, from and against any and all losses and liabilities, penalties, fines, forfeitures, demands, claims, causes of action, suits, costs and expenses incidental thereto (including cost of defense and attorney’s fees), which any or all of them may hereafter incur, be responsible for, or pay as a result of injury, death, disease, or occupational disease to any person, and for damage (including environmental contamination and loss of use) to or loss of any property, including property of Railroad, arising out of or in any degree directly or indirectly caused by or resulting from activities of or work performed by Permittee, its officers, employees, agents, servants, contractors, subcontractors, or any other person acting for or by permission of Permittee. The foregoing obligation shall not be limited by the existence of any insurance policy or by any limitation on the amount or type of damages, compensation, or benefits payable by or for Permittee or any contractor or subcontractor, and shall survive the termination of this permit for any reason. As used in this paragraph, the term “Railroad” includes the National Railroad Passenger Corporation, all commuter agencies and other railroads, and their respective officers, directors, employees, agents, servants, successors, assigns and subsidiaries.

4. **CONSIDERATION FOR PREPARATION OF TEMPORARY PERMIT.** Permittee will pay to Railroad the sum of __________________________ Dollars ($________.00) as compensation for the preparation of this Temporary Permit.

5. **STARTING OF USE OF PROPERTY.** Permittee shall notify Railroad’s Chief Engineer-Structures, or his designee, at least ten (10) days in advance before entering upon, or starting any work on, the Property. No entry upon or use of the Property will be permitted until a fully executed copy of this Temporary Permit is returned to Railroad, and specific permission to enter upon the Property is received from Director I&C Projects, 30th Street Station, Box 64, Philadelphia, PA 19104, telephone number 215-349-4971.
6. RAILROAD OPERATIONS. All activities by or on behalf of Permittee (and all contractors, subcontractors and/or any other entity or person acting for or by permission of Permittee (hereinafter collectively called "Contractors") shall be performed so as not to interfere with Railroad's operations or any of Railroad's facilities. In no event shall personnel, equipment or material cross a track or tracks without special advance permission from Railroad's Chief Engineer-Structures or his designee. If, in the opinion of Railroad's Chief Engineer-Structures or his designee, conditions warrant at any time, Railroad will provide flag service and/or other protection at the sole cost and expense of Permittee, and Permittee agrees to pay to Railroad the full cost and expense therefor.

7. CLEARANCES. All equipment and material of Permittee and Contractors shall be kept at all times not less than fifteen (15) feet from the centerline of the outside track, unless specifically otherwise authorized in writing by Railroad's Chief Engineer-Structures or his designee. Permittee and Contractors shall conduct all operations so that no part of any equipment shall foul an operated track; transmission, communication or signal line; or any other structure or facility of Railroad.

8. RESTORATION OF PREMISES. Upon completion of its work, Permittee and Contractors shall, at the option of Railroad, (a) leave the Property in a condition satisfactory to Railroad or, (b) restore the Property to its original condition. This may include, without limitation, the restoration of any fences removed or damaged by Permittee or Contractors.

9. TERM OF PERMIT. This Temporary Permit shall commence on the date Railroad receives a fully executed copy of this Temporary Permit pursuant to paragraph 15 hereof and shall extend until the end of the period Railroad determines is necessary for Permittee to accomplish the purpose set forth in Paragraph 1; provided, however, Railroad reserves the right to revoke this Temporary Permit at any time, and in no event shall this Temporary Permit extend beyond __________, 2001. Under no circumstances shall this Temporary Permit be construed as granting to Permittee or Contractors any right, title or interest of any kind or character in, on, or about any property of Railroad.

10. PROTECTION. All work in, on, or about the Property shall be in accordance with the document entitled "SPECIFICATIONS REGARDING SAFETY AND PROTECTION OF RAILROAD TRAFFIC AND PROPERTY," a copy of which is attached hereto as Exhibit A and incorporated herein by reference.

11. INSURANCE. Before Permittee or Contractors commence any work in, on, or about the Property, Permittee, and Contractors (unless Permittee opts to provide coverage for them), shall furnish to Director I&C Projects, with evidence of Workers' Compensation, Commercial General Liability Insurance, and other coverages, as specified in the document entitled "INSURANCE REQUIREMENTS - NATIONAL RAILROAD PASSENGER CORPORATION," a copy of which is attached hereto as Exhibit B and incorporated here by reference.

12. SAFETY ORIENTATION CLASS. No person may enter within twenty-five (25) feet of the Property until he/she has attended Railroad's Safety Orientation Class, as noted in paragraph (11) of Exhibit A.

13. COMPLIANCE BY CONTRACTORS. Permittee shall take all steps necessary to assure that Contractors comply with the terms and conditions of this Temporary Permit.
14. **LABOR CHARGES, PAYMENTS.** Railroad’s labor charges will be billed to Permittee at Railroad’s standard force account rates. Except as specified in Paragraph 4 hereof, all costs, payments and other amounts due from Permittee to Railroad under this Temporary Permit shall be due and payable within thirty (30) days from the date of invoice therefor. Permittee shall have no right to offset against any payment due under this Temporary Permit any sums which Permittee may believe are due to it from Railroad for any reason whatsoever. In the event that Permittee shall fail to pay, when due, any amount payable by it under this Temporary Permit, Permittee shall also pay to Railroad, together with such overdue payment, interest on the overdue amount at an annual rate of six (6) percentage points over and above the rate published from time to time by The Wall Street Journal as the prime commercial lending rate (or the highest rate allowed by law, if less than the foregoing), calculated from the date the payment was due until paid. All payments due from Permittee to Railroad hereunder shall be: (a) made by check drawn from currently available funds; (b) deemed made only upon receipt by Railroad of collected funds; (c) made payable to National Railroad Passenger Corporation; and (d) delivered to the National Railroad Passenger Corporation, P.O. Box 18266F, St. Louis, Missouri, 63150. All payment obligations of Permittee under this Temporary Permit shall survive the termination or expiration of this Temporary Permit.

15. **ACCEPTANCE.** To confirm acceptance of this Temporary Permit, one fully executed copy must be returned to: Director I&C Projects, National Railroad Passenger Corporation, 30th Street Station, Box 64, Philadelphia, PA 19104. The second copy may be retained for your file.

**NATIONAL RAILROAD PASSENGER CORPORATION**

By: __________________________________________

JAMES S. RICHTER, P. E.
CHIEF ENGINEER - STRUCTURES

Date: __________________________________________

AGREED TO AND ACCEPTED:

By: (signature)

Title: Must be an Owner/Partner or duly authorized representative

Date: ________________________________

bc: File

JSR/KLK/
EXHIBIT A

SPECIFICATIONS REGARDING SAFETY AND PROTECTION OF RAILROAD TRAFFIC AND PROPERTY

National Railroad Passenger Corporation (Railroad)

In the following Specifications "Chief Engineer" shall mean Railroad's Vice President, Chief Engineer, "Railroad" shall mean the National Railroad Passenger Corporation, and/or his/her duly authorized representative.

1) **Pre-Entry Meeting**: Before entry of Permittee and/or Contractors onto Railroad's property, a pre-entry meeting shall be held at which time Permittee and/or Contractors shall submit for written approval of the Chief Engineer, plans, computations and a detailed description of proposed methods for accomplishing the work, including methods for protecting Railroad's traffic. Any such written approval shall not relieve Permittee and/or Contractor of their complete responsibility for the adequacy and safety of their operations.

2) **Rules, Regulations and Requirements**: Railroad traffic shall be maintained at all times with safety and continuity, and Permittee and/or Contractors shall conduct their operations in compliance with all rules, regulations, and requirements of Railroad (including these Specifications) with respect to any work performed on, over, under, within or adjacent to Railroad's property. Permittee and/or Contractors shall be responsible for acquainting themselves with such rules, regulations and requirements. Any violation of Railroad's safety rules, regulations, or requirements shall be grounds for the immediate suspension of the Permittee and/or Contractor work, and the re-training of all personnel, at the Permittee's expense.

3) **Maintenance of Safe Conditions**: If tracks or other property of Railroad are endangered during the work, Permittee and/or Contractor shall immediately take such steps as may be directed by Railroad to restore safe conditions, and upon failure of Permittee and/or Contractor to immediately carry out such direction, Railroad may take whatever steps are reasonably necessary to restore safe conditions. All costs and expenses of restoring safe conditions, and of repairing any damage to Railroad's trains, tracks, right-of-way or other property caused by the operations of Permittee and/or Contractors, shall be paid by Permittee.

4) **Protection in General**: Permittee and/or Contractors shall consult with the Chief Engineer to determine the type and extent of protection required to insure safety and continuity of railroad traffic. Any Inspectors, Track Foremen, Track Watchmen, Flagman, Signalmen, Electric Traction Linemen, or other employees deemed necessary by Railroad, at its sole discretion, for protective services shall be obtained from Railroad by Permittee and/or Contractors. The cost of same shall be paid directly to Railroad by Permittee. The provision of such employees by Railroad, and any other precautionary measures taken by Railroad, shall not relieve Permittee and/or Contractors from their complete responsibility for the adequacy and safety of their operations.
(5) **Protection for Work Near Electrified Track or Wire:** Whenever work is performed in the vicinity of electrified tracks and/or high voltage wires, particular care must be exercised, and Railroad's requirements regarding clearance to be maintained between equipment and tracks and/or energized wires, and otherwise regarding work in the vicinity of electrified tracks, must be strictly observed. No employees or equipment will be permitted to work near overhead wires, except when protected by a Class A employee of Railroad. **Permittee and/or Contractors must supply an adequate length of grounding cable (4/0 copper with approved clamps) for each piece of equipment working near or adjacent to any overhead wire.**

(6) **Fouling of Track or Wire:** No work will be permitted within twenty-five (25) feet of the centerline of track or the energized wire or have potential of getting within twenty-five (25) feet of track wire without the approval of the Chief Engineer's representative. Permittee and/or Contractors shall conduct their work so that no part of any equipment or material shall foul an active track or overhead wire without the written permission of the Chief Engineer's representative. **When Permittee and/or Contractors desire to foul an active track, they must provide the Chief Engineer's representative with their site-specific work plan a minimum of twenty-one (21) working days in advance, so that, if approved, arrangements may be made for proper protection of Railroad.** Any equipment shall be considered to be fouling a track or overhead wire when located (a) within fifteen (15) feet from the centerline of the track or within fifteen (15) feet from the wire, or (b) in such a position that failure of same, with or without a load, would bring it within fifteen (15) feet from the centerline of the track or within fifteen (15) feet from the wire and requires the presence of the proper Railroad protection personnel.

If acceptable to the Chief Engineer's representative, a safety barrier (approved temporary fence or barricade) may be installed at fifteen (15) feet from centerline of track or overhead wire to afford the Permittee and/or Contractor with a work area that is not considered fouling. Nevertheless, protection personnel may be required at the discretion of the Chief Engineer's representative.

(7) **Track Outages:** Permittee and/or Contractors shall verify the time and schedule of track outages from Railroad before scheduling any of their work on, over, under, within, or adjacent to Railroad's right-of-way. Railroad does not guarantee the availability of any track outage at any particular time. Permittee and/or Contractors shall schedule all work to be performed in such a manner as not to interfere with Railroad operations. Permittee and/or Contractors shall use all necessary care and precaution to avoid accidents, delay or interference with Railroad's trains or other property.

(8) **Demolition:** During any demolition, the Contractor must provide horizontal and vertical shields, designed by a Professional Engineer registered in the state in which the work takes place. These shields shall be designed in accordance with the Railroad's specifications and approved by the Railroad, so as to prevent any debris from falling onto the Railroad's right-of-way or other property. A grounded temporary vertical protective barrier must be provided if an existing vertical protective barrier is removed during demolition. In addition, if any openings are left in an existing bridge deck, a
protective fence must be erected at both ends of the bridge to prohibit unauthorized persons from entering onto the bridge.

(9) **Equipment Condition:** All equipment to be used in the vicinity of operating tracks shall be in “certified” first-class condition so as to prevent failures that might cause delay to trains or damage to Railroad’s property. No equipment shall be placed or put into operation near or adjacent to operating tracks without first obtaining permission from the Chief Engineer’s representative. **Under no circumstances shall any equipment or materials be placed or stored within twenty-five (25) feet from the centerline of an outside track, except as approved by the Site Specific Safety Work Plan.** To insure compliance with this requirement, Permittee and/or Contractors **must establish a twenty-five (25) foot foul line prior to the start of work** by either driving stakes, taping off or erecting a temporary fence, or providing an alternate method as approved by the Chief Engineer’s representative. Permittee and/or Contractors will be issued warning stickers which must be placed in the operating cabs of all equipment as a constant reminder of the twenty-five (25) foot clearance envelope.

(10) **Storage of Materials and Equipment:** No material or equipment shall be stored on Railroad’s property without first having obtained permission from the Chief Engineer. Any such storage will be on the condition that Railroad will not be liable for loss of or damage to such materials or equipment from any cause.

(11) **Condition of Railroad’s Property:** Permittee and/or Contractors shall keep Railroad’s property clear of all refuse and debris from its operations. Upon completion of the work, Permittee and/or Contractors shall remove from Railroad’s property all machinery, equipment, surplus materials, falsework, rubbish, temporary structures, and other property of the Permittee and/or Contractors and shall leave Railroad’s property in a condition satisfactory to the Chief Engineer.

(12) **Safety Training:** All individuals, including representatives and employees of the Permittee and/or Contractors, before entering onto Railroad’s property or coming within twenty-five (25) feet of the centerline of the track or energized wire shall first attend Railroad’s Safety Contractor/Leasee Employee Training Class. The Safety Orientation Class will be provided by Railroad’s Safety Representative at Permittee’s expense. A photo I.D. will be issued and must be worn/displayed while on Railroad property. All costs of complying with Railroad’s safety training shall be at the sole expense of Permittee. Permittee and/or Contractors shall appoint a qualified person as their Safety Representative. He/she shall continuously assure that all individuals comply with Railroad’s safety requirements. All safety training records shall be maintained with site specific work plan.

(13) **No Charges to Railroad:** It is expressly understood that neither these Specifications, nor any document to which they are attached, include any work for which Railroad is to be billed by Permittee and/or Contractors, unless Railroad gives a written request that such work be performed at Railroad’s expense.

Revised December 2000
EXHIBIT B

INSURANCE REQUIREMENTS FOR TEMPORARY PERMIT TO ENTER
NATIONAL RAILROAD PASSENGER CORPORATION
(AMTRAK)
Revised as of December 2000

DEFINITIONS

Whenever in these Insurance Requirements or in the plans or contract documents the words "Company," "Railroad," or "Amtrak" are used, the same shall mean National Railroad Passenger Corporation. "Contractor" shall be defined as the party identified as "Permittee" in the Permit to Enter Agreement, as well as its officers, employees, agents, servants, contractors, subcontractors, or any other person acting for or by permission of Permittee or the party identified as Contractor in the Preliminary Engineering Agreement or Force Account Agreement, as well as its officers, employees, agents, servants, contractors, subcontractors, or any other person acting for or by permission of Contractor. "Operations" shall be defined as activities of or work performed by Contractor, its officers, employees, agents, servants, contractors, subcontractors, or any other person acting for or by permission of Contractor. Agreement shall be defined as the Permit to Enter Agreement, Preliminary Engineering Agreement, and/or Force Account Agreement.

INSURANCE

The Contractor shall procure and maintain, at its sole cost and expense, the types of insurance specified below. Contractor shall evidence such coverage by submitting Certificate(s) of Insurance for Workers' Compensation, Commercial General Liability and Automobile Liability, and the original Railroad Protective Liability Policy, prior to commencement of Operations. All insurance shall be procured from insurers authorized to do business in the jurisdiction(s) where the Operations are to be performed. The Contractor shall require all subcontractors to carry the insurance required herein, or Contractor may, at its option, provide the coverage for any or all subcontractors, provided the evidence of insurance submitted by Contractor to Amtrak so stipulates. The insurance specified below shall provide for thirty (30) days prior written notice to Amtrak in the event coverage is substantially changed, canceled or non-renewed. All insurance specified below shall remain in force until all Operations are satisfactorily completed, all contractor personnel and equipment have been removed from railroad property, and any work has been formally accepted. Contractor's failure to comply with the insurance requirements set forth herein shall constitute a violation of this Agreement.
Workers' Compensation Insurance complying with the requirements of the statutes of the jurisdiction(s) in which the Operations will be performed, covering all employees of Contractor. Employer’s Liability coverage with limits of not less than $1 million each accident or illness shall be included.

In the event the Operations are to be performed on or over navigable waterways, a Longshoremen and Harbor Workers' Compensation Act Endorsement and a Maritime Coverage Endorsement are to be added, including coverage for wages, transportation, maintenance and cure.

Commercial General Liability Insurance covering liability of the Contractor with respect to all Operations to be performed and all obligations assumed by the Contractor under the terms of this Agreement. Products-completed operations, independent contractors and contractual liability coverages are to be included, with the contractual exclusion related to construction/demolition activity within fifty (50) feet of the railroad and any X-C-U exclusions deleted. The policy shall name Amtrak as an additional insured with respect to the Operations to be performed. Coverage under this policy, or policies, shall have limits of liability of not less than $2 million per occurrence, combined single limit, for bodily injury (including disease or death), personal injury and property damage (including loss of use) liability.

Automobile Liability Insurance covering the liability of Contractor arising out of the use of ANY VEHICLES which bear, or are required to bear, license plates according to the laws of the jurisdiction in which they are to be operated, and which are not covered under the Contractor’s Commercial General Liability insurance. The policy shall name Amtrak as an additional insured with respect to the Operations to be performed. Coverage under this policy shall have limits of liability of not less than $1 million per occurrence, combined single limit, for bodily injury and property damage (including loss of use) liability.

Railroad Protective Liability Insurance covering the Operations performed by Contractor or any subcontractor within fifty (50) feet vertically or horizontally of railroad tracks. The AAR-AASHTO (ISO/RIMA) Occurrence Form (claims-made forms are unacceptable) in the name of the National Railroad Passenger Corporation (and any other railroad operating over the tracks) shall have limits of liability of not less than $2 million per occurrence, combined single limit, for Coverages A and B, for losses arising out of injury to or death of all persons, and for physical loss or damage to or destruction of property, including the loss of use thereof. A $6 million annual aggregate shall apply. Additionally, Policy Endorsement CG 28 31 - Pollution Exclusion Amendment, is required to be endorsed onto the policy.